

State of New Mexico
Oil Conservation Division

Incident ID	nCH1903363086
District RP	
Facility ID	
Application ID	


Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Albert Ochoa Title: HSE Representative
 Signature:  Date: 05/13/2021
 email: albert.ochoa@goodnightmidstream.com Telephone: (432) 242-6629

OCD Only

Received by: Chad Hensley Date: 08/02/2021

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  Date: 08/02/2021
 Printed Name: Chad Hensley Title: Environmental Specialist Advanced

Incidents #nCH1903363086 and #nDHR1918658476 affected the same area. In accordance with the NMOCD, the releases were remediated concurrently. To aid in recordkeeping, the attached *Remediation Summary & Soil Closure Request* has been submitted through the NMOCD Online Payment Portal for **each** incident.

Remediation Summary & Soil Closure Request


Goodnight Midstream Permian, LLC Penroc State E & Piper SWD Fire


Lea County, New Mexico
Unit Letter "M", Section 18, Township 21 South, Range 37 East
Latitude 32.472598 North, Longitude 103.207210 West
NMOCD Reference Nos. nCH1903363086 & nDHR1918658476

Prepared By:

Etech Environmental & Safety Solutions, Inc.

3100 Plains Highway
Lovington, New Mexico 88260



Ben J. Arguijo

Joel W. Lowry

Midland • San Antonio • Lubbock • Lovington • Lafayette

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1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Goodnight Midstream Permian, LLC, has prepared this *Remediation Summary & Soil Closure Request* for the releases known as the Penroc State E and Piper SWD Fire. A fire and subsequent release on June 24, 2019, at the Piper SWD (NMOCD Incident #nDHR1918658476) affected areas that had been previously impacted by a release that occurred on December 22, 2018 (Penroc State E, NMOCD Incident #nCH1903363086). A majority of each of the releases was confined within the lined salt water disposal (SWD) containment area. However, portions of the releases breached the containment and affected the caliche pad/access road and the adjacent pasture.

Details of the individual releases are summarized below. The areas affected by the commingled releases (henceforth referred to collectively as "the Site") were delineated and remediated concurrently.

Penroc State E Location of Release Source				
Latitude: _____		32.472587		Longitude: _____
				-103.207328
<small>Provided GPS are in WGS84 format.</small>				
Site Name: _____		Penroc State E		Site Type: _____
				SWD
Date Release Discovered: _____		12/22/2018		API # (if applicable): _____
				30-025-26491
Unit Letter	Section	Township	Range	County
"M"	18	21S	37E	Lea
Surface Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Federal <input type="checkbox"/> Tribal <input type="checkbox"/> Private (Name _____)				
Nature and Volume of Release				
<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls)		5	Volume Recovered (bbls)
				4
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls)		595	Volume Recovered (bbls)
				594
Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
<input type="checkbox"/> Condensate	Volume Released (bbls)		Volume Recovered (bbls)	
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)		Volume Recovered (Mcf)	
<input type="checkbox"/> Other (describe)	Volume/Weight Released		Volume/Weight Recovered	
Cause of Release: The release was attributed to a filter having a blockage, which caused a back-up of fluid flowing out of the top.				
Initial Response				
<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.				

Piper SWD Fire Location of Release Source

Latitude: 32.472598 Longitude: -103.207210

Provided GPS are in format.

Site Name:	Piper SWD Fire	Site Type:	SWD
Date Release Discovered:	6/24/2019	API # (if applicable):	N/A

Unit Letter	Section	Township	Range	County
"M"	18	21S	37E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name _____)

Nature and Volume of Release

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 400	Volume Recovered (bbls) 355
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released	Volume/Weight Recovered
<p>Cause of Release: The release was attributed to a storage tank catching fire. A majority of the release was confined within the lined containment. Approximately 45 bbls flowed south, outside the containment.</p>		

Initial Response

<input checked="" type="checkbox"/>	The source of the release has been stopped.
<input checked="" type="checkbox"/>	The impacted area has been secured to protect human health and the environment.
<input checked="" type="checkbox"/>	Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices
<input checked="" type="checkbox"/>	All free liquids and recoverable materials have been removed and managed appropriately.

Previously submitted portions of the NMOCD Form C-141 for each release are available on the NMOCD Imaging System.

2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half-mile radius of the Site. Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. Depth to groundwater information is provided as Appendix A.

Site Assessment/Characterization

	>141'	
What is the shallowest depth to groundwater beneath the area affected by the release?		
Did the release impact groundwater or surface water?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) and Fish & Wildlife Services (FWS) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted in Figures 1, 2, 4, and 5.

Commercial well CP-01245-2 is the only existing fresh water well within 1,000 feet of the Site. The well is no longer in use and is scheduled to be plugged and abandoned forthwith.

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

Based on the volume and nature of the releases, inferred depth to groundwater, and NMOCD Siting Criteria, the NMOCD Closure Criteria and NMOCD Reclamation Standards for the Site are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
>141'	Chloride (Cl-)	EPA 300.0 or SM4500 Cl B	10,000	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	2,500	100
	Gas Range Organics + Diesel Range Organics (GRO + DRO)	EPA SW-846 Method 8015M	1,000	-
	Benzene	EPA SW-846 Methods 8021b or 8260b	10	10
	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA SW-846 Methods 8021b or 8260b	50	50

* Measured in milligrams per kilogram (mg/kg)

† Table I, Section 19.15.29.12 of the New Mexico Administrative Code (NMAC).

‡ The NMOCD Reclamation Standard applies only to the top 4' of soil in non-production areas. Section 19.15.29.13 D.(1) NMAC.

4.0 INITIAL SITE ASSESSMENT

On June 25 and 26, 2019, Etech conducted an initial site assessment. During the initial site assessment, a series of hand-augered soil bores (SP #1 through SP #10) were advanced within the affected area outside the lined SWD containment area in an effort to determine the horizontal and vertical extent of impacted soil. In addition, one (1) hand-augered soil bore (SP #11) was advanced outside the inferred edges of the affected area in an effort to determine background conditions at the Site. During the advancement of the hand-augered soil bores, field soil samples were collected and field-screened for concentrations of chloride utilizing a Hach Quantab® chloride test kit. Based on field observations and field test results, additional delineation of the Site was required.

5.0 REMEDIATION ACTIVITIES SUMMARY (PHASE 1)

On June 26, 2019, upon completion of the initial site assessment, remediation activities commenced at the Site. Impacted soil outside of the tank battery containment area was excavated and stockpiled on-site, pending transfer to an NMOCD-permitted surface waste facility for disposal. The floor and sidewalls of the excavation were advanced until field observations and/or test results suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standard.

On July 11 and 12, 2019, Etech collected 26 confirmation soil samples (A2, A3, A4, B1, B2, B3, B4, C1, C2, C3, C4, D3, D4, E5, E6, NSW #1, NSW #2, ESW #1, ESW #2, SSW #1, WSW #1, WSW #2, Exc. B NSW, Exc. B ESW, Exc. B SSW, and Exc. B WSW) from the floor and sidewalls of the excavation to the south and east of the SWD facility. The soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and Reclamation Standard in each of the submitted soil samples, with the exceptions of soil samples NSW #2 and Exc. B WSW, which exhibited chloride concentrations of 4,800 mg/kg and 15,200 mg/kg, respectively. Further excavation in the areas characterized by soil samples NSW #2 and Exc. B WSW was precluded by the presence of the SWD containment area.

Upon review of laboratory analytical results, the excavation was backfilled with locally sourced, non-impacted, "like" material and compacted to facilitate the use of a crane to deconstruct and remove the SWD facility.

On August 16, 2020, following removal of the equipment, pipes, and appurtenances from within the SWD containment area, the liner was removed to investigate the underlying soil. Etech advanced a series of four (4) test trenches (TT-1 through TT-4) within the former containment area in an effort to determine the vertical extent of impacted soil. The test trenches were advanced to total depths ranging from one (1) foot bgs (TT-4) to nine (9) feet bgs (TT-2). During the advancement of the test trenches, eight (8) delineation soil samples (TT-1 @ Surface, TT-1 @ 4', TT-2 @ Surface, TT-2 @ 9', TT-3 @ Surface, TT-3 @ 7', TT-4 @ Surface, and TT-4 @ 1') were collected and submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated soil was not affected above the NMOCD Closure Criteria or Reclamation Standards beyond four (4) bgs in the areas characterized by test trenches TT-1 and TT-4.

Upon discovering impacted soil affected above the NMOCD Closure Criteria and NMOCD Reclamation Standard beneath the former SWD containment area, the uppermost four (4) feet of the affected area was excavated. The sidewalls of the excavation were advanced until laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the NMOCD Closure Criteria and NMOCD Reclamation Standards. The excavation was also advanced toward the west to encompass soil sample Exc. B WSW and south to encompass soil samples NSW #1 and NSW #2. Excavated soil was temporarily stockpiled on-site, pending transfer to an NMOCD-permitted surface waste facility for disposal.

On October 14, 2019, Etech collected twenty-seven (27) confirmation soil samples (Floor 1 through Floor 12, NW1b, NW2b, NW3b, EW1b, EW2, EW3, EW4b, SW1, SW2b, SW3b, SW4b, WW1b, WW2b, WW3, and WW4) from the floor and sidewalls of the excavation. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX concentrations were below the NMOCD Closure Criteria and NMOCD Reclamation Standard in each of the submitted soil samples. Chloride concentrations were below the NMOCD Closure Criteria and NMOCD Reclamation Standard in a majority of the submitted soil samples, with the exceptions of samples WW1b, WW2b, WW3, WW4,

Floor 2, Floor 4, Floor 5, Floor 7, and Floor 8, which exhibited chloride concentrations ranging from 688 mg/kg (Floor 7) to 2,800 mg/kg (WW1b). TPH concentrations were below the NMOCD Closure Criteria and NMOCD Reclamation Standard in a majority of the submitted soil samples, with the exceptions of samples EW3, Floor 2, Floor 9, and Floor 10, which exhibited TPH concentrations ranging from 104 mg/kg (Floor 10) to 1,850 mg/kg (EW3). Further advancement of the excavation in the areas characterized by soil samples WW1b, WW2b, WW3, and WW4 was precluded due to safety concerns.

On February 10, 2020, excavation activities resumed at the Site. The excavation was further advanced in the area characterized by soil sample EW3, and Etech collected one (1) confirmation soil sample (EW3b) from the sidewall of the excavation. The soil sample was submitted to the laboratory for analysis of TPH, which was determined to be below the NMOCD Closure Criteria and NMOCD Reclamation Standard.

Remediation actives were temporarily placed on hold pending the plugging and abandonment of commercial freshwater wells installed by the previous facility owner.

During Phase 1 of remediation activities, approximately 3,600 cubic yards of impacted soil was transported to an NMOCD-permitted surface waste facility for disposal.

6.0 PROPOSED REMEDIATION PLAN

Based on laboratory analytical results, site characteristics, and field observations made during the initial site assessment and subsequent remediation activities, Goodnight Midstream Permian, LLC, proposed the following remediation activities to the NMOCD designed to advance the Site toward an approved closure:

- Collect the remaining excavation confirmation soil samples from the floor and sidewalls of the excavated area.
- Advance the excavation sidewalls horizontally until laboratory analytical results from excavation confirmation soil samples indicate concentrations of BTEX, TPH, and chloride are below the NMOCD Closure Criteria and/or NMOCD Reclamation Standards.
- Upon receiving laboratory analytical results from excavation confirmation soil samples, install a 20-mil polyurethane liner on the floor of the excavated area atop impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standards remaining in-situ.
- Upon completion of remediation activities, prepare a *Remediation Summary and Site Closure Request* detailing remediation activities and the results of confirmation soil samples.

7.0 REGULATORY APPROVALS AND STIPULATIONS

On May 7, 2020, a revised *Site Assessment Report, Proposed Remediation Workplan and Alternative Closure Strategy* was submitted to the NMOCD, outlining a plan to advance the Site to an approved closure and requesting a variance to install a 20-mil, string-reinforced liner on the floor the excavation at approximately four (4) feet bgs. The workplan was subsequently approved by the NMOCD, with the stipulation that the areas characterized by sample points Floor 2, Floor 4, Floor 5, Floor 8, and Floor 9 be excavated an additional one (1) foot prior to installation of the liner and backfilling the excavation.

Please reference the revised *Site Assessment Report, Proposed Remediation Workplan and Alternative Closure Strategy* for additional details regarding the initial site assessment and proposed remediation activities.

8.0 REMEDIATION ACTIVITIES SUMMARY (PHASE 2)

On March 1, 2021, following plugging and abandonment of the on-site commercial freshwater wells, Etech resumed remediation activities at the Site. In accordance with the NMOCD-approved workplan and added stipulations, the excavation was advanced an additional one (1) foot bgs in the areas characterized by sample points Floor 2, Floor 4, Floor 5, Floor 8, and Floor 9 to a total depth of approximately five (5) feet bgs. Excavated soil was stockpiled on-site, pending transfer to an NMOCD-permitted surface waste facility for disposal.

On March 3, 2021, Etech collected five (5) confirmation soil samples (Floor 2 @ 5', Floor 4 @ 5', Floor 5 @ 5', Floor 8 @ 5', and Floor 9 @ 5'). The soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standard in each of the submitted soil samples.

On March 4, 2020, pursuant to the approved workplan, a 20-mil, string-reinforced, polyethylene liner was installed on the floor of the excavation. Prior to installation of the liner, the areas characterized by sample points Floor 2, Floor 4, Floor 5, Floor 8, and Floor 9 were backfilled to four (4) feet bgs to match the topography of the remainder of the excavation. An approximate 6-inch layer of pad material was installed both above and below the liner in an effort to maintain its integrity during backfilling activities. This engineering control is designed to inhibit the vertical migration of contaminants left in-situ.

The final dimensions of the excavated area were approximately 160 feet in length, 100 to 110 feet in width, and ranged from two (2) to five (5) feet in depth. During Phase 2 of remediation activities, an additional 40 cubic yards of impacted soil was transported to an NMOCD-permitted surface waste facility for disposal, for a grand total of approximately 3,640 cubic yards.

A "Site & Sample Location Map" is provided as Figure 3. A soil chemistry table is provided as Table 1. Field data and soil profile logs are provided in Appendix B. Laboratory analytical reports are provided in Appendix C. General photographs of the release site are provided in Appendix D.

9.0 RESTORATION, RECLAMATION, AND RE-VEGETATION PLAN

Upon receiving laboratory analytical results from confirmation soil samples, excavated areas were backfilled with locally sourced, non-impacted, "like" material placed at or near original relative positions. The affected areas were compacted and contoured to achieve erosion control, stability, and preservation of surface water flow, to the extent practicable. Affected areas not on production pads and/or lease roads will be reseeded with an agency and/or landowner-approved seed mixture free of noxious weeds during the first favorable growing season following closure of the Site.

10.0 SOIL CLOSURE REQUEST

Remediation activities were conducted in accordance with the 2020 *Site Assessment Report, Proposed Remediation Workplan and Alternative Closure Strategy*. Impacted soil affected above the NMOCD Closure Criteria and NMOCD Reclamation Standard was excavated and transported to an NMOCD-permitted disposal facility. Laboratory analytical results from excavation confirmation soil samples indicate concentrations of BTEX and TPH are below the NMOCD Closure Criteria and NMOCD Reclamation Standard, with the exception of soil sample Floor 10, which exhibited a TPH concentration of 104 mg/kg and was left in-situ with NMOCD approval.

In accordance with the NMOCD-approved workplan, a 20-mil, string-reinforced liner was installed on the floor of the excavation atop impacted soil exhibiting chloride concentrations above the NMOCD Closure Criteria and NMOCD Reclamation Standard. This engineering control is designed to inhibit the vertical migration of contaminants left in-situ.

Based on laboratory analytical results and field activities conducted to date, Etech recommends Goodnight Midstream Permian, LLC, provide copies of this *Remediation Summary & Soil Closure Request* to the appropriate agencies and request closure be granted to the Site.

11.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this *Remediation Summary & Soil Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents reference in the report and on oral statements made by certain individuals. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Goodnight Midstream Permian, LLC. Use of the information contained in this report is prohibited without the consent of Etech and/or Goodnight Midstream Permian, LLC.

12.0 DISTRIBUTION

Goodnight Midstream Permian, LLC

5910 N Central Expy

Dallas, TX 75206

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division, District 1

1220 South St. Francis Drive

Santa Fe, NM 87505

Hobbs Field Office

New Mexico State Land Office

2827 North Dal Paso Street

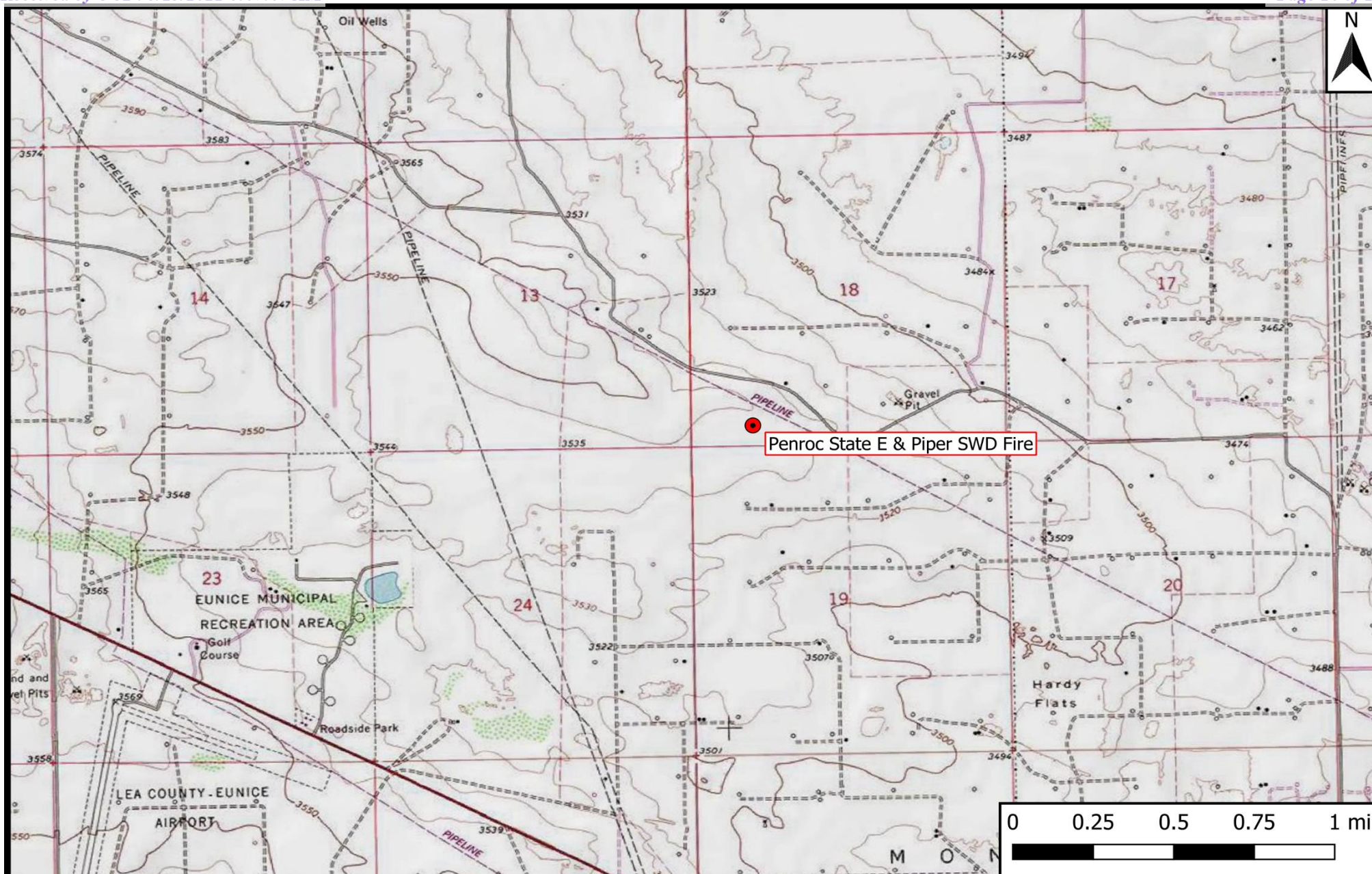
Suite 117

Hobbs, NM 88240

(Electronic Submission)

Figure 1

Topographic Map



Legend

- Site Location

Figure 1

Topographic Map
 Goodnight Midstream Permian, LLC
 Penroc State E & Piper SWD Fire
 GPS: 32.472598, -103.207210
 Lea County

ETECH
 Environmental & Safety Solutions, Inc.

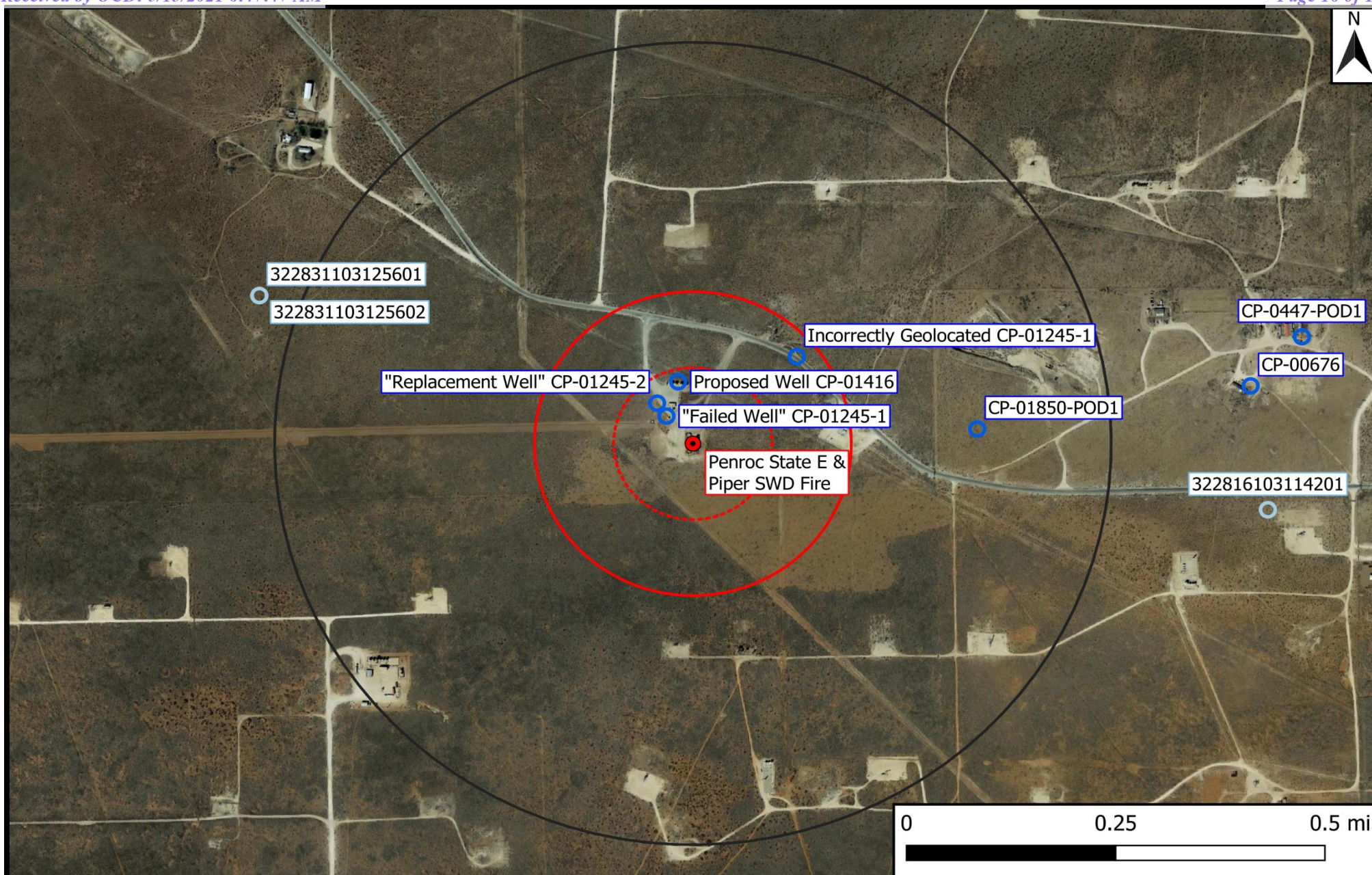
Drafted: bja

Checked: jwl

Date: 4/14/21

Figure 2

Aerial Proximity Map



Legend

- | | | |
|--------------------------------|----------------------------|-----------------|
| ● Site Location | 1% Annual Flood Chance | 500-Ft Radius |
| ○ Well - NMOSE | Emergent/Forested Wetlands | 1,000-Ft Radius |
| ○ Well - USGS | Freshwater Pond/Lake | 0.5-Mi Radius |
| ○ Well - Investigative/Monitor | Medium/High Karst | |
| — Potash Mine Workings | Riverine | |

Figure 2
 Aerial Proximity Map
 Goodnight Midstream Permian, LLC
 Penroc State E & Piper SWD Fire
 GPS: 32.472598, -103.207210
 Lea County



Drafted: bja

Checked: jwl

Date: 5/7/21

Figure 3

Site & Sample Location Map

**Legend**

Excavation Depth

2' bgs

4' bgs

5' bgs



Composite Floor Sample



20-mil Liner

Figure 3

Site & Sample Location Map (Phase 2)
 Goodnight Midstream Permian, LLC
 Penroc State E & Piper SWD Fire
 GPS: 32.472598, -103.207210
 Lea County

eTECH

Environmental & Safety Solutions, Inc.

Drafted: bja

Checked: jwl

Date: 4/14/21

Table 1
Concentrations of BTEX, TPH & Chloride in Soil

Table 1 Concentrations of BTEX, TPH & Chloride in Soil Goodnight Midstream Permian, LLC Penroc State E & Piper SWD Fire NMOCD Ref. #'s: nCH1903363086 & nDHR1918658476											
NMOCD Closure Criteria				10	50	-	-	-	-	100	600
NMOCD Reclamation Standard				10	50	-	-	-	-	100	600
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
A2	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
A3	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
A4	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
B1	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
B2	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
B3	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
B4	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
C1	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
C2	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
C3	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
C4	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
D3	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
D4	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
E5	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
E6	7/11/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
NSW#1	7/12/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
NSW#2	7/12/2019	2'	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	4,800
ESW#1	7/12/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
ESW#2	7/12/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
SSW#1	7/12/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
WSW#1	7/12/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
WSW#2	7/12/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
Exc. B ESW	7/12/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	416
Exc. B NSW	7/12/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	272
Exc. B SSW	7/12/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	352
Exc. B WSW	7/12/2019	2'	Excavated	<0.050	<0.300	<10.0	71.8	71.8	21.5	93.3	15,200
TT-1 @ Surface	8/16/2019	0'	Excavated	<0.050	<0.300	<10.0	672	672	192	864	4,800
TT-1	8/16/2019	4'	In-Situ	<0.050	<0.300	<10.0	45.8	45.8	12.1	57.9	144
TT-2 @ Surface	8/16/2019	0'	Excavated	<0.050	<0.300	<10.0	134	134	29.5	164	3,040
TT-2	8/16/2019	9'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	800
TT-3 @ Surface	8/16/2019	0'	Excavated	<0.050	<0.300	27.6	3,210	3,240	938	4,180	2,320
TT-3	8/16/2019	7'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	16.6	16.6	928
TT-4 @ Surface	8/16/2019	0'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
TT-4	8/16/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
NW1b	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	432
NW2b	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	512
NW3b	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
EW1b	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
EW2	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
EW3	10/14/2019	2'	Excavated	<0.050	<0.300	11.8	1,430	1,440	408	1,850	160
EW3b	2/10/2020	2'	In-Situ	-	-	<10.0	<10.0	<20.0	<10.0	<30.0	-

NOTES:

- = Sample not analyzed for that constituent.

Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

Table 1 Concentrations of BTEX, TPH & Chloride in Soil Goodnight Midstream Permian, LLC Penroc State E & Piper SWD Fire NMOCD Ref. #'s: nCH1903363086 & nDHR1918658476											
NMOCD Closure Criteria				10	50	-	-	-	-	100	600
NMOCD Reclamation Standard				10	50	-	-	-	-	100	600
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
EW4b	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
SW1	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
SW2b	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW3b	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	528
SW4b	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	240
WW1b	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,800
WW2b	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	960
WW3	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,180
WW4	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,240
Floor 1	10/14/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	352
Floor 2	10/14/2019	4'	Excavated	<0.050	<0.300	<10.0	147	147	59.6	207	2,160
Floor 2 @ 5'	3/3/2021	5'	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	226
Floor 3	10/14/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
Floor 4	10/14/2019	4'	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,560
Floor 4 @ 5'	3/3/2021	5'	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	89.4
Floor 5	10/14/2019	4'	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,240
Floor 5 @ 5'	3/3/2021	5'	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	479
Floor 6	10/14/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	448
Floor 7	10/14/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	688
Floor 8	10/14/2019	4'	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,600
Floor 8 @ 5'	3/3/2021	5'	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	236
Floor 9	10/14/2019	4'	Excavated	<0.050	<0.300	<10.0	965	965	239	1,200	480
Floor 9 @ 5'	3/3/2021	5'	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	136
Floor 10	10/14/2019	4'	In-Situ	<0.050	<0.300	<10.0	72.4	72.4	31.5	104	288
Floor 11	10/14/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	240
Floor 12	10/14/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	384

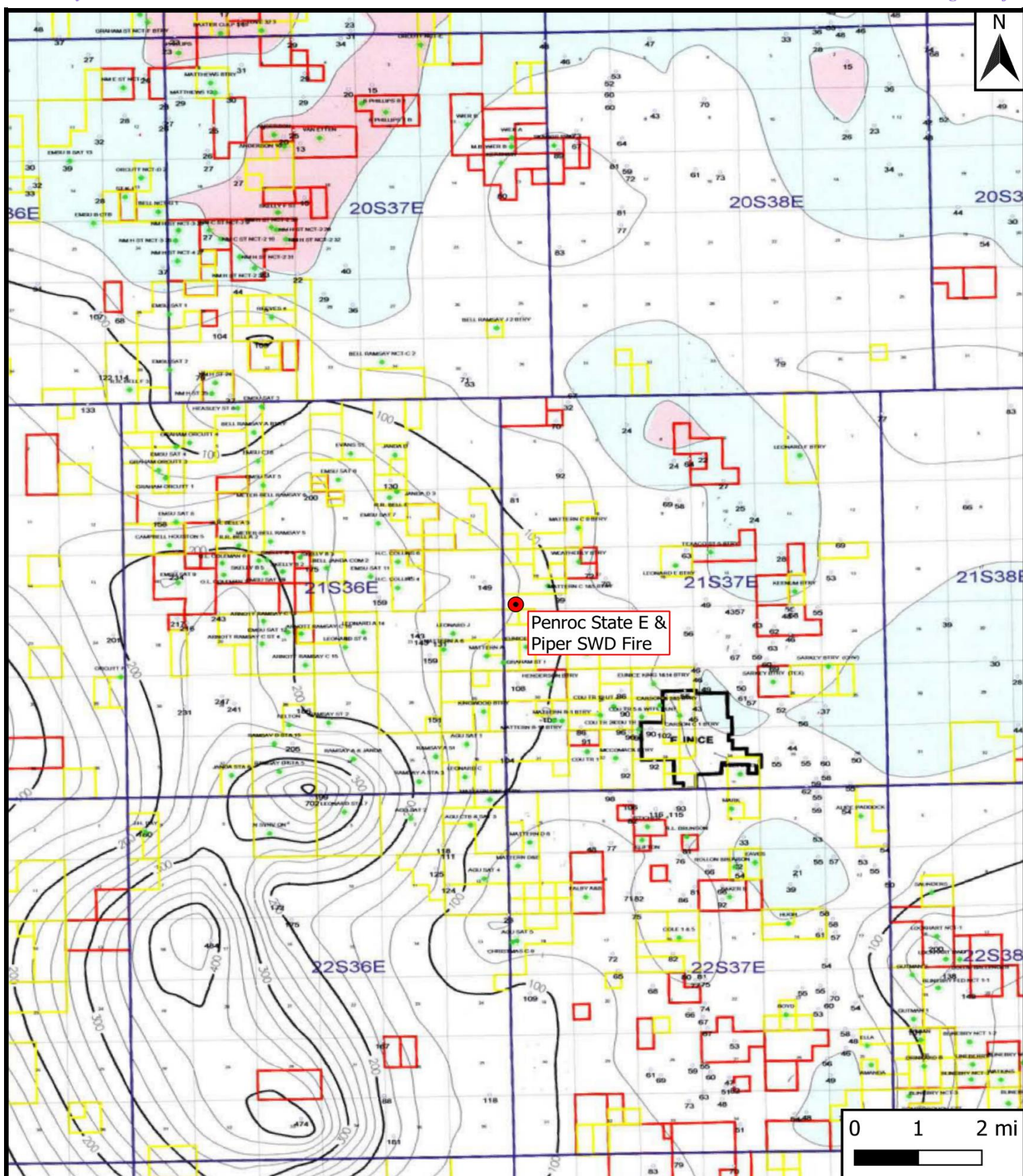
NOTES:

- = Sample not analyzed for that constituent.

Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

Appendix A

Depth to Groundwater Information



Legend

- Site Location

Figure 4

Inferred Depth to Groundwater Trend Map
 Goodnight Midstream Permian, LLC
 Penroc State E & Piper SWD Fire
 GPS: 32.472598, -103.207210
 Lea County

eTECH
 Environmental & Safety Solutions, Inc.

Drafted: bja

Checked: jwl

Date: 4/14/21



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 01245 POD1	CP	LE				4	18	21S	37E	668676	3594411	265	220		
CP 01850 POD1	CP	LE		3	3	4	18	21S	37E	669023	3594266	548	200	110	90
CP 00446 POD1	CP	LE		1	4	4	13	21S	36E	667871	3594424*	632	185	148	37
CP 00446 POD2	CP	LE		1	4	4	13	21S	36E	667871	3594424*	632	200	151	49

Average Depth to Water: **136 feet**

Minimum Depth: **110 feet**

Maximum Depth: **151 feet**

Record Count: 4

UTM NAD83 Radius Search (in meters):

Easting (X): 668475

Northing (Y): 3594237

Radius: 804.67

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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WATER COLUMN/ AVERAGE
DEPTH TO WATER




New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64 Q16 Q4	Sec	Tws	Rng	X	Y
CP 01245	POD1	4	18	21S	37E	668676	3594411 

Driller License: 1682 **Driller Company:** HUNGRY HORSE, LLC.

Driller Name: NORRIS, JOHN D.

Drill Start Date: 09/25/2013

Drill Finish Date: 09/30/2013

Plug Date:

Log File Date: 11/06/2013

PCW Rcv Date:

Source: Shallow

Pump Type: SUBMER

Pipe Discharge Size:

Estimated Yield:

Casing Size: 8.00

Depth Well: 220 feet

Depth Water:

Water Bearing Stratifications:

Top Bottom Description

34 83 Sandstone/Gravel/Conglomerate

89 214 Sandstone/Gravel/Conglomerate

Casing Perforations:

Top Bottom

0 220

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4/16/21 11:05 AM

Page 1 of 1

POD SUMMARY - CP 01245 POD1



New Mexico Office of the State Engineer

Water Right Summary



WR File Number: CP 01245 **Subbasin:** CP **Cross Reference:** -
Primary Purpose: COM COMMERCIAL
Primary Status: PMT PERMIT
Total Acres: 0 **Subfile:** - **Header:** -
Total Diversion: 80 **Cause/Case:** -
Owner: PIPER ENERGY, LLC.
Contact: CHARLES R. BRIGGS
Owner: ATKINS ENGR ASSOC INC
Contact: RICHARD C CIBAK

Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/		Acres	Diversion	Consumptive
			1	2		To				
604424	SUPPL	2015-07-13	PMT	APR	CP 01245	T		0	0	0
604415	APPRO	2014-04-29	PMT	APR	CP 01245	T		0	80	80

Current Points of Diversion

POD Number	Well Tag	Source	Q		Tw	Rng	(NAD83 UTM in meters)		Y	Other Location Desc
			64	Q16			X			
CP 01245 POD1		Shallow	4	18	21S	37E	668676		3594411	
CP 01245 POD2			4	18	21S	37E	668417		3594283	

Priority Summary

Priority	Status	Acres	Diversion	Pod Number	
10/09/2013	PMT	0	80	CP 01245 POD1	Shallow
				CP 01245 POD2	

Place of Use

Q	Q	Tw	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
256	64									
				0	80	80	COM	10/09/2013	PMT	NO PLACE OF USE GIVEN

Source

Acres	Diversion	CU	Use	Priority	Source Description
0	80	80	COM	10/09/2013	GW

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/7/21 2:04 PM

WATER RIGHT
SUMMARY



New Mexico Office of the State Engineer

Transaction Summary

SUPPL Application for Supplemental Well (Ground)

Transaction Number: 604424

Transaction Desc: CP 01245

File Date: 09/17/2014

Primary Status: PMT Permit

Secondary Status: APR Approved

Person Assigned: *****

Applicant: PIPER ENERGY, LLC.

Contact: CHARLES R. BRIGGS

Applicant: ATKINS ENGINEERING ASSOC, INC.

Contact: RICHARD C. CIBAK

Events

Date	Type	Description	Comment	Processed By
09/17/2014	APP	Application Received	*	*****
09/29/2014	NFP	Notice for Publication		*****
05/18/2015	AOP	Affidavit of Publication rev		*****
07/13/2015	NUC	No PBU or PCW Approval		*****
07/13/2015	FIN	Final Action on application		*****
03/20/2017	QAT	Quality Assurance Completed	SQ2	*****
03/30/2017	QAT	Quality Assurance Completed	IMAGE	*****
04/20/2020	ARW	WRAB Main File Rm Arch Sect	CP 01245 Archived	*****

Water Right Information

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
CP 01245	0	0	0	COM COMMERCIAL
**Point of Diversion				
CP 01245 POD2		668417	3594283	

Remarks

"APPLICATION IS FILED TO DRILL A WELL TO BE USED AS A SUPPLEMENTAL/ALTERNATE POINT OF DIVERSION TO THE PREVIOUSLY PERMITTED WELL CP-1245. WELL CP-1245 HAS PARTIALLY FAILED RESULTING IN REDUCED CAPACITY."

"APPLICANT REQUESTS EMERGENCY AUTHORIZATION TO IMMEDIATELY DRILL AND USE THE CP-1245-POD2 WELL PURSUANT TO NEW MEXICO STATUTE 72-12-24. ATTACHED TO THIS APPLICATION IS A AFFIDAVIT REQUESTING AUTHORIZATION PURSUANT TO 72-12-24 NMSA(1978)."

"ALSO ATTACHED TO THIS APPLICATION IS A COPY OF NEW MEXICO STATE LAND OFFICE WATER EASEMENT NO. WR-715, AMENDMENT #1.

SAID AMENDMENT INCLUDES INFORMATION AUTHORIZING THE
DRILLING AND USE OF ADDITIONAL WELLS."

Conditions

- C Driller's well record must be filed with the State Engineer within 20 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.
- 7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.
- Q The State Engineer retains jurisdiction over this permit.

Action of the State Engineer

**** See Image For Any Additional Conditions of Approval ****

Approval Code: A - Approved

Action Date: 07/13/2015

State Engineer:

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/7/21 1:51 PM

TRANSACTION SUMMARY



New Mexico Office of the State Engineer

Water Right Summary



WR File Number: CP 01416 **Subbasin:** CP **Cross Reference:** -
Primary Purpose: COM COMMERCIAL
Primary Status: PMT PERMIT
Total Acres: 0 **Subfile:** - **Header:** -
Total Diversion: 150 **Cause/Case:** -
Agent: ATKINS ENGR ASSOC INC
Contact: RICHARD C CIBAK
Owner: PIPER ENERGY, LLC
Contact: CHARLES R. BRIGGS

Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
		605873 APPRO 2015-10-29	PMT	APR	CP 01416	T	0	150	150

Current Points of Diversion

POD Number	Well Tag	Source	Q		(NAD83 UTM in meters)		Other Location Desc
			64Q16Q4Sec	Tws Rng	X	Y	
CP 01416 POD1			4 18 21S	37E	668436	3594361	N1/2 OR S1/2, NE1/4

Priority Summary

Priority	Status	Acres	Diversion	Pod Number
09/17/2014	PMT	0	150	CP 01416 POD1

Place of Use

Q	Q			Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
256	64 Q16 Q4Sec	Tws	Rng							
				0	150	150	COM	08/17/2014	PMT	NO PLACE OF USE GIVEN

Source

Acres	Diversion	CU	Use	Priority	Source Description
0	150	150	COM	09/17/2014	GW

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/7/21 2:02 PM

WATER RIGHT
SUMMARY



New Mexico Office of the State Engineer

Transaction Summary

APPRO Application to Appropriate

Transaction Number: 605873

Transaction Desc: CP 01416

File Date: 09/17/2014

Primary Status: PMT Permit

Secondary Status: APR Approved

Person Assigned: *****

Agent: ATKINS ENGINEERING ASSOC, INC.

Contact: RICHARD C, CIBAK

Applicant: PIPER ENERGY, LLC

Contact: CHARLES R. BRIGGS

Events

Date	Type	Description	Comment	Processed By
09/17/2014	APP	Application Received	*	*****
10/02/2014	NFP	Notice for Publication		*****
10/28/2014	AOP	Affidavit of Publication rev		*****
10/29/2015	PUC	PBU/PCW Approval		*****
10/29/2015	FIN	Final Action on application		*****
04/14/2017	QAT	Quality Assurance Completed	SQ2	*****
04/24/2017	QAT	Quality Assurance Completed	IMAGE	*****
04/20/2020	ARW	WRAB Main File Rm Arch Sect	CP 01416 Archived	*****

Water Right Information

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
CP 01416	0	150	150	COM COMMERCIAL

**Point of Diversion

CP 01416 POD1	668436	3594361	
---------------	--------	---------	--

**Place of Use

Q	Q	Q	Q	Sec	Tws	Rng	Acres	Diversion	Consumptive	Use	Priority	Status	Other	Loc	Desc
256	64	16	4				0	150	150	COM	08/17/2014	PMT		NO PLACE OF	USE GIVEN

Remarks

"APPLICATION IS BEING MADE TO DRILL A NEW WELL AND APPROPRIATE UP TO 150.0 ACRE-FEET PER ANNUM FOR COMMERCIAL WATER SALES USES."

"ATTACHED TO THIS APPLICATION IS COPY OF A NEW MEXICO STATE LAND OFFICE WATER EASEMENT NO. WR-715, AMENDMENT #1. SAID EASEMENT AMENDMENT INCLUDES AUTHORIZATION TO DRILL ADDITIONAL WELLS IN LOT 4 OF SEC 18, T-21-S, R-37-E, N.M.P.M."

x

Conditions

- 5C A totalizing meter shall be installed before the first branch of the discharge line form the well and the installation shall be acceptable to the State Engineer; the Engineer shall be advised of the make, model, serial number, date of installation, and initial reading shall be submitted to the District Supervisor for each calendar year on or before the 10th day of January of the following year.
- 7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.
- Q The State Engineer retains jurisdiction over this permit.

x

Action of the State Engineer**** See Image For Any Additional Conditions of Approval ******Approval Code:** A - Approved**Action Date:** 10/29/2015**PCW Due Date:** 10/31/2017**PBU Due Date:** 10/31/2019**State Engineer:**

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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
TRANSACTION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
 (quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
20C52	CP 01850 POD1	3	3	4	18	21S	37E	669023	3594266 

Driller License: 1753 **Driller Company:** VANGUARD WATER WELLS

Driller Name: FRIESSEN, JACOBOIEL.NER

Drill Start Date: 12/11/2020

Drill Finish Date: 12/11/2020

Plug Date:

Log File Date: 12/23/2020

PCW Rcv Date:

Source: Shallow

Pump Type:

Pipe Discharge Size:

Estimated Yield: 20 GPM

Casing Size: 5.00

Depth Well: 200 feet

Depth Water: 110 feet

Water Bearing Stratifications:

Top Bottom Description

90	198	Sandstone/Gravel/Conglomerate
----	-----	-------------------------------

Casing Perforations:

Top Bottom

180	200
-----	-----

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4/16/21 11:05 AM

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POD SUMMARY - CP 01850 POD1



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)						(NAD83 UTM in meters)	
		(quarters are smallest to largest)							
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
CP 00446	POD1	1	4	4	13	21S	36E	667871	3594424*
Driller License:		Driller Company:							
Driller Name:		FRANK TURNER							
Drill Start Date:	10/31/1915	Drill Finish Date:		10/31/1915		Plug Date:			
Log File Date:		PCW Rcv Date:				Source:			
Pump Type:	TURBIN	Pipe Discharge Size:		2.25		Estimated Yield: 100 GPM			
Casing Size:	8.63	Depth Well:		185 feet		Depth Water: 148 feet			

*UTM location was derived from PLSS - see Help

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4/19/21 12:55 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)						(NAD83 UTM in meters)	
		(quarters are smallest to largest)							
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00446 POD2	1	4	4	13	21S	36E	667871	3594424*🌐

X

Driller License:		Driller Company:								
Driller Name:		GRDAY ROBERTS								
Drill Start Date:		12/31/1945		Drill Finish Date:			12/31/1945		Plug Date:	
Log File Date:		PCW Rev Date:			Source:					
Pump Type:		TURBIN		Pipe Discharge Size:			4		Estimated Yield: 120 GPM	
Casing Size:		8.63		Depth Well:			200 feet		Depth Water: 151 feet	

*UTM location was derived from PLSS - see Help

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4/19/21 12:56 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)						(NAD83 UTM in meters)	
		(quarters are smallest to largest)							
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00447 POD1	2	4	4	18	21S	37E	669647	3594451*
<hr/>									
Driller License: 122		Driller Company: UNKNOWN							
Driller Name: FRANK TURNER									
Drill Start Date:		Drill Finish Date:				Plug Date:			
Log File Date:		PCW Rev Date:				Source: Shallow			
Pump Type:		Pipe Discharge Size:				Estimated Yield: 20 GPM			
Casing Size: 7.00		Depth Well: 95 feet				Depth Water:			

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/7/21 2:01 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
 (quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00676	4	4	18	21S	37E	669548	3594352*	

Driller License: 1196 **Driller Company:** MCCASLAND, DALLAS

Driller Name: MCCASLAND, DALLAS

Drill Start Date: 04/29/1993

Drill Finish Date: 04/30/1993

Plug Date:

Log File Date: 06/22/1994

PCW Rcv Date:

Source: Shallow

Pump Type:

Pipe Discharge Size:

Estimated Yield: 20 GPM

Casing Size: 4.00

Depth Well: 140 feet

Depth Water: 106 feet

Water Bearing Stratifications:	Top	Bottom	Description
	100	106	Sandstone/Gravel/Conglomerate

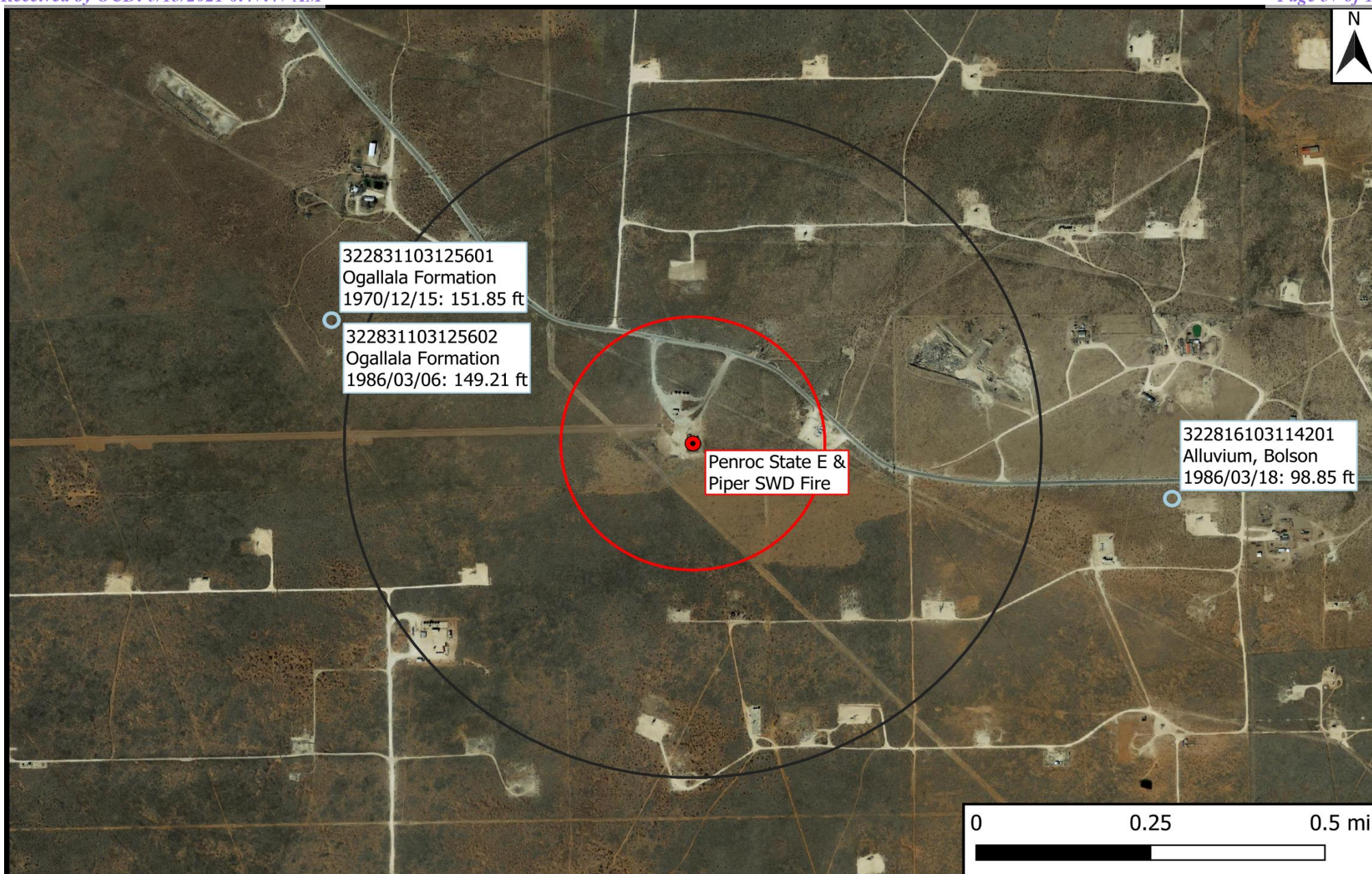
*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

4/16/21 11:06 AM

Page 1 of 1

POD SUMMARY - CP 00676



Legend

- Site Location
- Well - USGS
- 1,000-Ft Radius
- 0.5-Mi Radius

Figure 5

USGS Well Proximity Map
Goodnight Midstream Permian, LLC
Penroc State E & Piper SWD Fire
GPS: 32.472598, -103.207210
Lea County



Drafted: bja

Checked: jwl

Date: 4/14/21



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Agency code = usgs

site_no list =

- 322831103125601

Minimum number of levels = 1

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USGS 322831103125601 21S.36E.13.41223

Lea County, New Mexico

Latitude 32°28'31", Longitude 103°12'56" NAD27

Land-surface elevation 3,557 feet above NAVD88

The depth of the well is 200 feet below land surface.

This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
			72019								
1967-10-10		D	72019	150.88			1	Z			A
1968-03-19		D	72019	150.97			1	Z			A
1970-12-15		D	72019	151.85			3	Z			A

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	3	Above
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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0.31 0.29 nadww02





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Agency code = usgs

site_no list =

- 322831103125602

Minimum number of levels = 1

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USGS 322831103125602 21S.36E.13.412232

Lea County, New Mexico

Latitude 32°28'31", Longitude 103°12'56" NAD27

Land-surface elevation 3,557 feet above NAVD88

The depth of the well is 185 feet below land surface.

This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
<input type="text"/>	<input type="text"/>	<input type="text"/>	72019	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1967-10-10			D	72019	147.44			1	Z		A
1970-12-15			D	72019	147.81			1	Z		A
1981-03-09			D	72019	149.29			1	Z		A
1986-03-06			D	72019	149.21			1	Z		A

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 322816103114201

Minimum number of levels = 1

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USGS 322816103114201 21S.37E.18.442123

Lea County, New Mexico

Latitude 32°28'16", Longitude 103°11'42" NAD27

Land-surface elevation 3,513 feet above NAVD88

The depth of the well is 125 feet below land surface.

This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
			72019								
1954-01-10			D	72019	99.70			1	Z		A
1968-03-13			D	72019	98.92			1	Z		A
1970-12-15			D	72019	99.66			1	Z		A
1981-02-27			D	72019	98.82			1	Z		A
1986-03-18			D	72019	98.85			1	Z		A

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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0.34 0.28 nadww01



Appendix B

Field Data & Soil Profile Logs

Piper SWP Fire

6/25/19

Matthew Grieco

Point	Time	PPM Cl_{low}	Cl_{high}
SP11@S	11:05	<108	
SP10@S	11:08	72728	4848
SP9@S	11:11		4484
SP8@S	11:13		6084
SP8@3'		164	
SP7@S	11:15		3252
SP6@S	11:18		3532
SP5@S	11:23		2068
→ SP4@S	11:26		8900 ← Ignoring point
SP3@S	11:29		5644
SP2@S	11:34		4484
SP1@S	11:36		4148
SP10@1'			1508
SP10@2'			2504
SP10@3'		<108	<1184
SP9@1'			3832
SP9@2'		<108	<1184
SP9@3'		164	<1184
SP8@1'			3252
SP8@2'		1728	

Piper SWD fine
6/25/19

Matthew Grieco

<u>Point</u>	<u>Time</u>	<u>CI_{low}</u>	<u>CI_{high}</u>
SP7@1'		3	3832
SP7@2'			1508
SP7@3'		1728	
SP3@1'		604	<1184
SP3@2'		1252	
SP3@3'		604	
SP2@1'		<108	<1184
SP2@2'		320	
SP3@3'		604	
SP6@1'		200	<1184
SP6@2'		200	
SP6@3'		364	
SP5@1'		<108	<1184
SP5@2'		<108 ₂₀₀	
SP5@3'		200	
SP1@1'		556	
SP1@2'		1620	
SP1@3'		832	



Sample Log

Date:

8/16/2019

Project: Piper SWD Fire

Project Number: 10769

Latitude: 32.472598

Longitude: -103.20721

[illegible]

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples= SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas



Soil Profile

Date: 11-Jul-19

Project: Piper SWD Fire

Project Number: 10769 Latitude: 32.472598 Longitude: -103.20721

Depth (ft. bgs)		Description
TD	1	Topsoil
	2	
	3	
	4	
	5	Caliche
	6	
	7	
	8	
	9	
	10	
	11	
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	39	
	40	

Appendix C

Laboratory Analytical Reports



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

July 16, 2019

DANIEL DOMINGUEZ

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: PIPER SWD FIRE

Enclosed are the results of analyses for samples received by the laboratory on 07/12/19 14:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: A 2 (H902410-01)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTX	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	07/15/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2019	ND	188	94.1	200	2.24	
DRO >C10-C28*	<10.0	10.0	07/15/2019	ND	182	91.1	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/15/2019	ND					

Surrogate: 1-Chlorooctane 77.0 % 41-142

Surrogate: 1-Chlorooctadecane 76.0 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: A 3 (H902410-02)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTX	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	07/15/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2019	ND	188	94.1	200	2.24	
DRO >C10-C28*	<10.0	10.0	07/15/2019	ND	182	91.1	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/15/2019	ND					

Surrogate: 1-Chlorooctane 72.5 % 41-142

Surrogate: 1-Chlorooctadecane 74.8 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: A 4 (H902410-03)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTX	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	07/15/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2019	ND	188	94.1	200	2.24	
DRO >C10-C28*	<10.0	10.0	07/15/2019	ND	182	91.1	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/15/2019	ND					

Surrogate: 1-Chlorooctane 62.3 % 41-142

Surrogate: 1-Chlorooctadecane 61.0 % 37.6-147

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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: B 1 (H902410-04)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTEX	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	07/15/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2019	ND	188	94.1	200	2.24	
DRO >C10-C28*	<10.0	10.0	07/15/2019	ND	182	91.1	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/15/2019	ND					

Surrogate: 1-Chlorooctane 73.4 % 41-142

Surrogate: 1-Chlorooctadecane 72.1 % 37.6-147

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Analytical Results For:

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 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: B 2 (H902410-05)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTEX	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/15/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2019	ND	188	94.1	200	2.24	
DRO >C10-C28*	<10.0	10.0	07/15/2019	ND	182	91.1	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/15/2019	ND					

Surrogate: 1-Chlorooctane 76.0 % 41-142

Surrogate: 1-Chlorooctadecane 76.1 % 37.6-147

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Analytical Results For:

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 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: B 3 (H902410-06)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTEx	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	07/15/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2019	ND	188	94.1	200	2.24	
DRO >C10-C28*	<10.0	10.0	07/15/2019	ND	182	91.1	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/15/2019	ND					

Surrogate: 1-Chlorooctane 73.4 % 41-142

Surrogate: 1-Chlorooctadecane 75.1 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: B 4 (H902410-07)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTEX	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	07/15/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2019	ND	188	94.1	200	2.24	
DRO >C10-C28*	<10.0	10.0	07/15/2019	ND	182	91.1	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/15/2019	ND					

Surrogate: 1-Chlorooctane 76.5 % 41-142

Surrogate: 1-Chlorooctadecane 79.7 % 37.6-147

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 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: C 1 (H902410-08)

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53		
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03		
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82		
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87		
Total BTEx	<0.300	0.300	07/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	07/15/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	201	100	200	3.33	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	189	94.7	200	6.79	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Analytical Results For:

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 DANIEL DOMINGUEZ
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 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: C 2 (H902410-09)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTX	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	07/15/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	201	100	200	3.33	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	189	94.7	200	6.79	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: C 3 (H902410-10)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTEx	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	07/15/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	201	100	200	3.33	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	189	94.7	200	6.79	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: C 4 (H902410-11)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTEX	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	07/15/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	201	100	200	3.33	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	189	94.7	200	6.79	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 98.2 % 41-142

Surrogate: 1-Chlorooctadecane 98.6 % 37.6-147

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 Lovington NM, 88260
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Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: D 3 (H902410-12)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTEX	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	07/15/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	201	100	200	3.33	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	189	94.7	200	6.79	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 93.4 % 41-142

Surrogate: 1-Chlorooctadecane 95.7 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: D 4 (H902410-13)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTEX	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	07/15/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	201	100	200	3.33	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	189	94.7	200	6.79	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 97.8 % 41-142

Surrogate: 1-Chlorooctadecane 99.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: E 5 (H902410-14)

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53		
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03		
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82		
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87		
Total BTEx	<0.300	0.300	07/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	07/15/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	201	100	200	3.33	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	189	94.7	200	6.79	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/12/2019	Sampling Date:	07/11/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: E 6 (H902410-15)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2019	ND	2.07	103	2.00	2.53	
Toluene*	<0.050	0.050	07/15/2019	ND	2.12	106	2.00	4.03	
Ethylbenzene*	<0.050	0.050	07/15/2019	ND	2.00	100	2.00	4.82	
Total Xylenes*	<0.150	0.150	07/15/2019	ND	6.23	104	6.00	4.87	
Total BTEx	<0.300	0.300	07/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	07/15/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	201	100	200	3.33	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	189	94.7	200	6.79	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 96.9 % 41-142

Surrogate: 1-Chlorooctadecane 97.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.				BILL TO				ANALYSIS REQUEST											
Project Manager:				P.O. #:				<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>											
Address: P.O. Box 301				Company: <u>E-tech</u>															
City: Lovington		State: NM		Zip: 88260		Attn:													
Phone #: (575) 396-2378		Fax #: (575) 396-1429		Address:		City:													
Project #: <u>10769</u>		Project Owner: <u>Goodnight</u>		State:		Zip:													
Project Name: <u>Piper Swd Fire</u> <u>Midstream</u>				Phone #:															
Project Location: <u>Lea County</u>				Fax #:															
Sampler Name: <u>Hilda Villa</u>																			
FOR LAB USE ONLY																			
Lab I.D.		Sample I.D.		(GRAB OR (C)OMP. # CONTAINERS)		MATRIX		PRESERV.		SAMPLING									
						GROUNDWATER													
						WASTEWATER													
						SOIL													
						OIL													
						SLUDGE													
						OTHER:													
						ACID/BASE:													
						ICE / COOL													
						OTHER:													
						DATE		TIME											
<u>H902410</u>																			
<u>1 A2</u>				<u>✓</u>				<u>✓</u>		<u>7-11-19</u>		<u>1:00pm</u>		<u>✓</u>					
<u>2 A3</u>				<u>✓</u>				<u>✓</u>		<u>7-11-19</u>		<u>1:05</u>		<u>✓</u>					
<u>3 A4</u>				<u>✓</u>				<u>✓</u>		<u>7-11-19</u>		<u>1:15</u>		<u>✓</u>					
<u>4 B1</u>				<u>✓</u>				<u>✓</u>		<u>7-11-19</u>		<u>1:18</u>		<u>✓</u>					
<u>5 B2</u>				<u>✓</u>				<u>✓</u>		<u>7-11-19</u>		<u>1:22</u>		<u>✓</u>					
<u>6 B3</u>				<u>✓</u>				<u>✓</u>		<u>7-11-19</u>		<u>1:30</u>		<u>✓</u>					
<u>7 B4</u>				<u>✓</u>				<u>✓</u>		<u>7-11-19</u>		<u>1:45</u>		<u>✓</u>					
<u>8 C1</u>				<u>✓</u>				<u>✓</u>		<u>7-11-19</u>		<u>1:50</u>		<u>✓</u>					
<u>9 C2</u>				<u>✓</u>				<u>✓</u>		<u>7-11-19</u>		<u>2:06</u>		<u>✓</u>					
<u>10 C3</u>				<u>✓</u>				<u>✓</u>		<u>7-11-19</u>		<u>2:25</u>		<u>✓</u>					
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Relinquished By: <u>[Signature]</u>				Date: <u>7/12/19</u>		Received By: <u>[Signature]</u>				Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:							
				Time: <u>14:55</u>						Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:							
Relinquished By:				Date:		Received By:				REMARKS:									
				Time:						Please email results to daniel@etechenv.com									
Delivered By: (Circle One)																			
Sampler - UPS - Bus - Other:				<u>1.4c #97</u>		Sample Condition				CHECKED BY:									
						Cool Intact				(Initials)									
						<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				<u>TO</u>									



101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

July 16, 2019

KIM MERRILL

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: PIPER SWD FIRE

Enclosed are the results of analyses for samples received by the laboratory on 07/15/19 14:12.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 KIM MERRILL
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/15/2019	Sampling Date:	07/12/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: NSW # 1 (H902418-01)

BTEX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	07/16/2019	ND	2.02	101	2.00	3.53	
Toluene*	<0.025	0.025	07/16/2019	ND	2.10	105	2.00	2.18	
Ethylbenzene*	<0.025	0.025	07/16/2019	ND	2.17	108	2.00	2.08	
Total Xylenes*	<0.075	0.075	07/16/2019	ND	7.06	118	6.00	1.10	
Total BTEX	<0.150	0.150	07/16/2019	ND					

Surrogate: Dibromofluoromethane 97.0 % 90.4-111

Surrogate: Toluene-d8 98.7 % 85.3-114

Surrogate: 4-Bromofluorobenzene 91.5 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	07/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	190	95.1	200	0.351	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	189	94.6	200	4.27	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 74.8 % 41-142

Surrogate: 1-Chlorooctadecane 81.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 KIM MERRILL
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/15/2019	Sampling Date:	07/12/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: NSW # 2 (H902418-02)

BTX 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	07/16/2019	ND	2.02	101	2.00	3.53		
Toluene*	<0.025	0.025	07/16/2019	ND	2.10	105	2.00	2.18		
Ethylbenzene*	<0.025	0.025	07/16/2019	ND	2.17	108	2.00	2.08		
Total Xylenes*	<0.075	0.075	07/16/2019	ND	7.06	118	6.00	1.10		
Total BTX	<0.150	0.150	07/16/2019	ND						

Surrogate: Dibromofluoromethane 99.6 % 90.4-111
 Surrogate: Toluene-d8 100 % 85.3-114
 Surrogate: 4-Bromofluorobenzene 90.2 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	07/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	190	95.1	200	0.351	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	189	94.6	200	4.27	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 69.8 % 41-142
 Surrogate: 1-Chlorooctadecane 76.7 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 KIM MERRILL
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/15/2019	Sampling Date:	07/12/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: ESW # 1 (H902418-03)

BTEx 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	07/16/2019	ND	2.02	101	2.00	3.53		
Toluene*	<0.025	0.025	07/16/2019	ND	2.10	105	2.00	2.18		
Ethylbenzene*	<0.025	0.025	07/16/2019	ND	2.17	108	2.00	2.08		
Total Xylenes*	<0.075	0.075	07/16/2019	ND	7.06	118	6.00	1.10		
Total BTEx	<0.150	0.150	07/16/2019	ND						

Surrogate: Dibromofluoromethane 98.9 % 90.4-111

Surrogate: Toluene-d8 97.9 % 85.3-114

Surrogate: 4-Bromofluorobenzene 90.7 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	07/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 60.3 % 41-142

Surrogate: 1-Chlorooctadecane 71.4 % 37.6-147

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Analytical Results For:

Etech Environmental & Safety Solutions
 KIM MERRILL
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/15/2019	Sampling Date:	07/12/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: ESW # 2 (H902418-04)

BTX 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	07/16/2019	ND	2.02	101	2.00	3.53		
Toluene*	<0.025	0.025	07/16/2019	ND	2.10	105	2.00	2.18		
Ethylbenzene*	<0.025	0.025	07/16/2019	ND	2.17	108	2.00	2.08		
Total Xylenes*	<0.075	0.075	07/16/2019	ND	7.06	118	6.00	1.10		
Total BTX	<0.150	0.150	07/16/2019	ND						

Surrogate: Dibromofluoromethane 98.6 % 90.4-111

Surrogate: Toluene-d8 98.6 % 85.3-114

Surrogate: 4-Bromofluorobenzene 89.3 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	07/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	204	102	200	0.980	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	211	106	200	4.39	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Analytical Results For:

Etech Environmental & Safety Solutions
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 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/15/2019	Sampling Date:	07/12/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: SSW # 1 (H902418-05)

BTX 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	07/16/2019	ND	2.02	101	2.00	3.53		
Toluene*	<0.025	0.025	07/16/2019	ND	2.10	105	2.00	2.18		
Ethylbenzene*	<0.025	0.025	07/16/2019	ND	2.17	108	2.00	2.08		
Total Xylenes*	<0.075	0.075	07/16/2019	ND	7.06	118	6.00	1.10		
Total BTX	<0.150	0.150	07/16/2019	ND						

Surrogate: Dibromofluoromethane 99.1 % 90.4-111

Surrogate: Toluene-d8 98.0 % 85.3-114

Surrogate: 4-Bromofluorobenzene 90.8 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	07/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	204	102	200	0.980	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	211	106	200	4.39	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 99.8 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 396-1429

Received:	07/15/2019	Sampling Date:	07/12/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: WSW # 1 (H902418-06)

BTEx 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	07/16/2019	ND	2.02	101	2.00	3.53		
Toluene*	<0.025	0.025	07/16/2019	ND	2.10	105	2.00	2.18		
Ethylbenzene*	<0.025	0.025	07/16/2019	ND	2.17	108	2.00	2.08		
Total Xylenes*	<0.075	0.075	07/16/2019	ND	7.06	118	6.00	1.10		
Total BTEx	<0.150	0.150	07/16/2019	ND						

Surrogate: Dibromofluoromethane 100 % 90.4-111

Surrogate: Toluene-d8 98.5 % 85.3-114

Surrogate: 4-Bromofluorobenzene 91.9 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	07/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	204	102	200	0.980	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	211	106	200	4.39	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Analytical Results For:

Etech Environmental & Safety Solutions
 KIM MERRILL
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 Fax To: (575) 396-1429

Received:	07/15/2019	Sampling Date:	07/12/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: WSW # 2 (H902418-07)

BTX 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	07/16/2019	ND	2.02	101	2.00	3.53		
Toluene*	<0.025	0.025	07/16/2019	ND	2.10	105	2.00	2.18		
Ethylbenzene*	<0.025	0.025	07/16/2019	ND	2.17	108	2.00	2.08		
Total Xylenes*	<0.075	0.075	07/16/2019	ND	7.06	118	6.00	1.10		
Total BTX	<0.150	0.150	07/16/2019	ND						

Surrogate: Dibromofluoromethane 99.2 % 90.4-111

Surrogate: Toluene-d8 99.1 % 85.3-114

Surrogate: 4-Bromofluorobenzene 90.1 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	07/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	204	102	200	0.980	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	211	106	200	4.39	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 97.4 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 396-1429

Received:	07/15/2019	Sampling Date:	07/12/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: EXC. B NSW (H902418-08)

BTEx 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	07/16/2019	ND	2.02	101	2.00	3.53		
Toluene*	<0.025	0.025	07/16/2019	ND	2.10	105	2.00	2.18		
Ethylbenzene*	<0.025	0.025	07/16/2019	ND	2.17	108	2.00	2.08		
Total Xylenes*	<0.075	0.075	07/16/2019	ND	7.06	118	6.00	1.10		
Total BTEx	<0.150	0.150	07/16/2019	ND						

Surrogate: Dibromofluoromethane 98.5 % 90.4-111

Surrogate: Toluene-d8 97.9 % 85.3-114

Surrogate: 4-Bromofluorobenzene 87.8 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	07/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 66.3 % 41-142

Surrogate: 1-Chlorooctadecane 74.2 % 37.6-147

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Analytical Results For:

Etech Environmental & Safety Solutions
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 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	07/15/2019	Sampling Date:	07/12/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: EXC. B ESW (H902418-09)

BTEx 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	07/16/2019	ND	2.02	101	2.00	3.53	
Toluene*	<0.025	0.025	07/16/2019	ND	2.10	105	2.00	2.18	
Ethylbenzene*	<0.025	0.025	07/16/2019	ND	2.17	108	2.00	2.08	
Total Xylenes*	<0.075	0.075	07/16/2019	ND	7.06	118	6.00	1.10	
Total BTEx	<0.150	0.150	07/16/2019	ND					

Surrogate: Dibromofluoromethane 100 % 90.4-111

Surrogate: Toluene-d8 98.7 % 85.3-114

Surrogate: 4-Bromofluorobenzene 91.4 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	07/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 61.5 % 41-142

Surrogate: 1-Chlorooctadecane 74.2 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 396-1429

Received:	07/15/2019	Sampling Date:	07/12/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: EXC. B SSW (H902418-10)

BTX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	07/16/2019	ND	2.02	101	2.00	3.53	
Toluene*	<0.025	0.025	07/16/2019	ND	2.10	105	2.00	2.18	
Ethylbenzene*	<0.025	0.025	07/16/2019	ND	2.17	108	2.00	2.08	
Total Xylenes*	<0.075	0.075	07/16/2019	ND	7.06	118	6.00	1.10	
Total BTX	<0.150	0.150	07/16/2019	ND					

Surrogate: Dibromofluoromethane 101 % 90.4-111

Surrogate: Toluene-d8 97.9 % 85.3-114

Surrogate: 4-Bromofluorobenzene 90.5 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	07/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 56.5 % 41-142

Surrogate: 1-Chlorooctadecane 72.5 % 37.6-147

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Analytical Results For:

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Received:	07/15/2019	Sampling Date:	07/12/2019
Reported:	07/16/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

Sample ID: EXC. B WSW (H902418-11)

BTX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	07/16/2019	ND	2.02	101	2.00	3.53	
Toluene*	<0.025	0.025	07/16/2019	ND	2.10	105	2.00	2.18	
Ethylbenzene*	<0.025	0.025	07/16/2019	ND	2.17	108	2.00	2.08	
Total Xylenes*	<0.075	0.075	07/16/2019	ND	7.06	118	6.00	1.10	
Total BTX	<0.150	0.150	07/16/2019	ND					

Surrogate: Dibromofluoromethane 101 % 90.4-111

Surrogate: Toluene-d8 99.4 % 85.3-114

Surrogate: 4-Bromofluorobenzene 90.2 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	15200	16.0	07/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	71.8	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	21.5	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 71.5 % 41-142

Surrogate: 1-Chlorooctadecane 92.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 2

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476



CARDINAL
Laboratories

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.				BILL TO				ANALYSIS REQUEST																						
Project Manager: Kim Merrill				P.O. #:																										
Address: PO Box 301				Company: Etech																										
City: Lovington St NM Zip: #				Attn:																										
Phone #: 575 396 2378 Fax #:				Address:																										
Project #: 10769 Project Owner Goodnight MidStream				City:																										
Project Name: Piper SWD				State: Zip:																										
Project Location: Lea				Phone #:																										
Sampler Name: Joel Lowry				Fax #:																										
FOR LAB USE ONLY																														
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP. # CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Chloride	TPH	BTEX 8021												
H902418 11		Exc. B WSW																	C	1		X					X		7/12/19	10:40
<p>PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>																														
Relinquished By: Joel Lowry				Date: 7/15/19				Received By: [Signature]				Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Phone #:														
Relinquished By: [Signature]				Date: 7/15/19				Received By: Samara [Signature]				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Fax #:														
Delivered By: (Circle One)				Time: 14:12				Sample Condition				CHECKED BY:				REMARKS: Push!! Please email results to pm@etechenv.com, daniel@etechenv.com and joel@etechenv.com														
Sampler - UPS - Bus - Other:				3.6c #47				Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No				T.O.																		



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 29, 2019

DANIEL DOMINGUEZ

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: PIPER SWD FIRE

Enclosed are the results of analyses for samples received by the laboratory on 08/23/19 15:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Coley D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	08/23/2019	Sampling Date:	08/16/2019
Reported:	08/29/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - M, 18,21,37		

Sample ID: TT - 1 @ SURFACE (H902917-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2019	ND	1.72	86.2	2.00	2.96	
Toluene*	<0.050	0.050	08/27/2019	ND	1.93	96.5	2.00	2.57	
Ethylbenzene*	0.066	0.050	08/27/2019	ND	1.98	99.2	2.00	3.86	
Total Xylenes*	<0.150	0.150	08/27/2019	ND	6.02	100	6.00	4.76	
Total BTEX	<0.300	0.300	08/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	08/28/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	229	114	200	3.48	
DRO >C10-C28*	672	10.0	08/28/2019	ND	232	116	200	0.504	QM-07
EXT DRO >C28-C36	192	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 76.1 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	08/23/2019	Sampling Date:	08/16/2019
Reported:	08/29/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - M, 18,21,37		

Sample ID: TT - 1 @ 4' (H902917-02)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/27/2019	ND	1.72	86.2	2.00	2.96		
Toluene*	<0.050	0.050	08/27/2019	ND	1.93	96.5	2.00	2.57		
Ethylbenzene*	<0.050	0.050	08/27/2019	ND	1.98	99.2	2.00	3.86		
Total Xylenes*	<0.150	0.150	08/27/2019	ND	6.02	100	6.00	4.76		
Total BTEX	<0.300	0.300	08/27/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/28/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	229	114	200	3.48	
DRO >C10-C28*	45.8	10.0	08/28/2019	ND	232	116	200	0.504	
EXT DRO >C28-C36	12.1	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 90.9 % 41-142

Surrogate: 1-Chlorooctadecane 98.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	08/23/2019	Sampling Date:	08/16/2019
Reported:	08/29/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - M, 18,21,37		

Sample ID: TT - 2 @ SURFACE (H902917-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2019	ND	1.72	86.2	2.00	2.96	
Toluene*	<0.050	0.050	08/27/2019	ND	1.93	96.5	2.00	2.57	
Ethylbenzene*	<0.050	0.050	08/27/2019	ND	1.98	99.2	2.00	3.86	
Total Xylenes*	<0.150	0.150	08/27/2019	ND	6.02	100	6.00	4.76	
Total BTX	<0.300	0.300	08/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3040	16.0	08/28/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	229	114	200	3.48	
DRO >C10-C28*	134	10.0	08/28/2019	ND	232	116	200	0.504	
EXT DRO >C28-C36	29.5	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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Analytical Results For:

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 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	08/23/2019	Sampling Date:	08/16/2019
Reported:	08/29/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - M, 18,21,37		

Sample ID: TT - 2 @ 9' (H902917-04)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/27/2019	ND	1.72	86.2	2.00	2.96		
Toluene*	<0.050	0.050	08/27/2019	ND	1.93	96.5	2.00	2.57		
Ethylbenzene*	<0.050	0.050	08/27/2019	ND	1.98	99.2	2.00	3.86		
Total Xylenes*	<0.150	0.150	08/27/2019	ND	6.02	100	6.00	4.76		
Total BTX	<0.300	0.300	08/27/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	08/28/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	229	114	200	3.48	
DRO >C10-C28*	<10.0	10.0	08/28/2019	ND	232	116	200	0.504	
EXT DRO >C28-C36	<10.0	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 93.1 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	08/23/2019	Sampling Date:	08/16/2019
Reported:	08/29/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - M, 18,21,37		

Sample ID: TT - 3 @ SURFACE (H902917-05)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/27/2019	ND	1.72	86.2	2.00	2.96		
Toluene*	<0.050	0.050	08/27/2019	ND	1.93	96.5	2.00	2.57		
Ethylbenzene*	0.061	0.050	08/27/2019	ND	1.98	99.2	2.00	3.86		
Total Xylenes*	0.196	0.150	08/27/2019	ND	6.02	100	6.00	4.76		
Total BTEx	<0.300	0.300	08/27/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 118 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2320	16.0	08/28/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	27.6	10.0	08/28/2019	ND	227	113	200	0.151	
DRO >C10-C28*	3210	10.0	08/28/2019	ND	234	117	200	3.14	QM-07
EXT DRO >C28-C36	938	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 190 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	08/23/2019	Sampling Date:	08/16/2019
Reported:	08/29/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - M, 18,21,37		

Sample ID: TT - 3 @ 7' (H902917-06)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/27/2019	ND	1.72	86.2	2.00	2.96		
Toluene*	<0.050	0.050	08/27/2019	ND	1.93	96.5	2.00	2.57		
Ethylbenzene*	<0.050	0.050	08/27/2019	ND	1.98	99.2	2.00	3.86		
Total Xylenes*	<0.150	0.150	08/27/2019	ND	6.02	100	6.00	4.76		
Total BTX	<0.300	0.300	08/27/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	928	16.0	08/28/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	227	113	200	0.151	
DRO >C10-C28*	<10.0	10.0	08/28/2019	ND	234	117	200	3.14	
EXT DRO >C28-C36	16.6	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 114 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	08/23/2019	Sampling Date:	08/16/2019
Reported:	08/29/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - M, 18,21,37		

Sample ID: TT - 4 @ SURFACE (H902917-07)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/27/2019	ND	1.72	86.2	2.00	2.96		
Toluene*	<0.050	0.050	08/27/2019	ND	1.93	96.5	2.00	2.57		
Ethylbenzene*	<0.050	0.050	08/27/2019	ND	1.98	99.2	2.00	3.86		
Total Xylenes*	<0.150	0.150	08/27/2019	ND	6.02	100	6.00	4.76		
Total BTEX	<0.300	0.300	08/27/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/28/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	227	113	200	0.151	
DRO >C10-C28*	<10.0	10.0	08/28/2019	ND	234	117	200	3.14	
EXT DRO >C28-C36	<10.0	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 115 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	08/23/2019	Sampling Date:	08/16/2019
Reported:	08/29/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - M, 18,21,37		

Sample ID: TT - 4 @ 1' (H902917-08)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/27/2019	ND	1.72	86.2	2.00	2.96		
Toluene*	<0.050	0.050	08/27/2019	ND	1.93	96.5	2.00	2.57		
Ethylbenzene*	<0.050	0.050	08/27/2019	ND	1.98	99.2	2.00	3.86		
Total Xylenes*	<0.150	0.150	08/27/2019	ND	6.02	100	6.00	4.76		
Total BTEx	<0.300	0.300	08/27/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/28/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	227	113	200	0.151	
DRO >C10-C28*	<10.0	10.0	08/28/2019	ND	234	117	200	3.14	
EXT DRO >C28-C36	<10.0	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 120 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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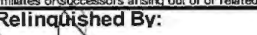
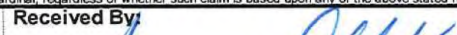

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

[illegible]

Relinquished By: 		Date: 8-23-19	Received By: 	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Time: 3:35 pm				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By: 		Date:	Received By:	REMARKS: email results to daniield@etechenv.com	
Time:					
Delivered By: (Circle One) 5.28 #97		Sample Condition	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other: Corrected 5.6i		Cool <input type="checkbox"/> Yes <input type="checkbox"/> No	Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		

FORM-006 R 2.0



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 23, 2019

DANIEL DOMINGUEZ

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: PIPER SWD FIRE

Enclosed are the results of analyses for samples received by the laboratory on 10/17/19 16:41.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 1 (H903563-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.88	93.9	2.00	5.62		
Toluene*	<0.050	0.050	10/19/2019	ND	1.89	94.7	2.00	5.58		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.90	95.0	2.00	5.65		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.69	94.8	6.00	5.77		
Total BTEX	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	10/22/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 84.6 % 41-142

Surrogate: 1-Chlorooctadecane 95.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 2 (H903563-02)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/19/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2160	16.0	10/22/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	147	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	59.6	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 90.6 % 41-142

Surrogate: 1-Chlorooctadecane 115 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 3 (H903563-03)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/19/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	10/22/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 90.6 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 4 (H903563-04)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/19/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2560	16.0	10/22/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 83.6 % 41-142

Surrogate: 1-Chlorooctadecane 92.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 5 (H903563-05)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/19/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	10/22/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 86.3 % 41-142

Surrogate: 1-Chlorooctadecane 95.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 6 (H903563-06)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/19/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.38	89.6	6.00	9.46		
Total BTEx	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	10/22/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 88.1 % 41-142

Surrogate: 1-Chlorooctadecane 97.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 7 (H903563-07)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/19/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	10/22/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 93.3 % 41-142

Surrogate: 1-Chlorooctadecane 99.9 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 8 (H903563-08)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/19/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2600	16.0	10/22/2019	ND	432	108	400	3.77	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 85.4 % 41-142

Surrogate: 1-Chlorooctadecane 99.2 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 9 (H903563-09)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46		
Total BTEx	<0.300	0.300	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	10/22/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	965	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	239	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 82.2 % 41-142

Surrogate: 1-Chlorooctadecane 130 % 37.6-147

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Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 10 (H903563-10)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	10/22/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	72.4	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	31.5	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 86.9 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 11 (H903563-11)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	10/22/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 84.6 % 41-142

Surrogate: 1-Chlorooctadecane 95.7 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: FLOOR 12 (H903563-12)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 88.8 % 41-142

Surrogate: 1-Chlorooctadecane 99.9 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: NW 1 b (H903563-13)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 92.7 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: NW 2 b (H903563-14)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55	
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40	
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42	
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46	
Total BTX	<0.300	0.300	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	10/22/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 84.9 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: NW 3 b (H903563-15)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 90.6 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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Analytical Results For:

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 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: EW 1 b (H903563-16)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 84.1 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Analytical Results For:

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 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: EW 2 (H903563-17)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46		
Total BTX	<0.300	0.300	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	205	103	200	5.85	
DRO >C10-C28*	<10.0	10.0	10/19/2019	ND	197	98.5	200	4.30	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 90.5 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: EW 3 (H903563-18)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55	
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40	
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42	
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46	
Total BTX	<0.300	0.300	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	10/22/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	11.8	10.0	10/21/2019	ND	215	108	200	2.74	
DRO >C10-C28*	1430	10.0	10/21/2019	ND	208	104	200	1.57	
EXT DRO >C28-C36	408	10.0	10/21/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 146 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: EW 4 b (H903563-19)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55	
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40	
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42	
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46	
Total BTX	<0.300	0.300	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/21/2019	ND	215	108	200	2.74	
DRO >C10-C28*	<10.0	10.0	10/21/2019	ND	208	104	200	1.57	
EXT DRO >C28-C36	<10.0	10.0	10/21/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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Analytical Results For:

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 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: SW 1 (H903563-20)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55		
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40		
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42		
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46		
Total BTEx	<0.300	0.300	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	10/22/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/21/2019	ND	215	108	200	2.74	
DRO >C10-C28*	<10.0	10.0	10/21/2019	ND	208	104	200	1.57	
EXT DRO >C28-C36	<10.0	10.0	10/21/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Analytical Results For:

Etech Environmental & Safety Solutions
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 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: SW 2 b (H903563-21)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/20/2019	ND	1.81	90.5	2.00	9.55	
Toluene*	<0.050	0.050	10/20/2019	ND	1.81	90.4	2.00	9.40	
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	1.80	90.1	2.00	9.42	
Total Xylenes*	<0.150	0.150	10/20/2019	ND	5.38	89.6	6.00	9.46	
Total BTX	<0.300	0.300	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/22/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/21/2019	ND	215	108	200	2.74	
DRO >C10-C28*	<10.0	10.0	10/21/2019	ND	208	104	200	1.57	
EXT DRO >C28-C36	<10.0	10.0	10/21/2019	ND					

Surrogate: 1-Chlorooctane 98.3 % 41-142

Surrogate: 1-Chlorooctadecane 99.9 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: SW 3 b (H903563-22)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.88	93.9	2.00	5.62		
Toluene*	<0.050	0.050	10/19/2019	ND	1.89	94.7	2.00	5.58		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.90	95.0	2.00	5.65		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.69	94.8	6.00	5.77		
Total BTEx	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	528	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/21/2019	ND	215	108	200	2.74	
DRO >C10-C28*	<10.0	10.0	10/21/2019	ND	208	104	200	1.57	
EXT DRO >C28-C36	<10.0	10.0	10/21/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 99.4 % 37.6-147

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Analytical Results For:

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Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: SW 4 b (H903563-23)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.88	93.9	2.00	5.62		
Toluene*	<0.050	0.050	10/19/2019	ND	1.89	94.7	2.00	5.58		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.90	95.0	2.00	5.65		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.69	94.8	6.00	5.77		
Total BTEx	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/21/2019	ND	215	108	200	2.74	
DRO >C10-C28*	<10.0	10.0	10/21/2019	ND	208	104	200	1.57	
EXT DRO >C28-C36	<10.0	10.0	10/21/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: WW 1 b (H903563-24)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.88	93.9	2.00	5.62		
Toluene*	<0.050	0.050	10/19/2019	ND	1.89	94.7	2.00	5.58		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.90	95.0	2.00	5.65		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.69	94.8	6.00	5.77		
Total BTEx	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2800	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/21/2019	ND	215	108	200	2.74	
DRO >C10-C28*	<10.0	10.0	10/21/2019	ND	208	104	200	1.57	
EXT DRO >C28-C36	<10.0	10.0	10/21/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: WW 2 b (H903563-25)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/19/2019	ND	1.88	93.9	2.00	5.62		
Toluene*	<0.050	0.050	10/19/2019	ND	1.89	94.7	2.00	5.58		
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.90	95.0	2.00	5.65		
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.69	94.8	6.00	5.77		
Total BTEx	<0.300	0.300	10/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	960	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/21/2019	ND	215	108	200	2.74	
DRO >C10-C28*	<10.0	10.0	10/21/2019	ND	208	104	200	1.57	
EXT DRO >C28-C36	<10.0	10.0	10/21/2019	ND					

Surrogate: 1-Chlorooctane 95.1 % 41-142

Surrogate: 1-Chlorooctadecane 95.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: WW 3 (H903563-26)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/19/2019	ND	1.88	93.9	2.00	5.62	
Toluene*	<0.050	0.050	10/19/2019	ND	1.89	94.7	2.00	5.58	
Ethylbenzene*	<0.050	0.050	10/19/2019	ND	1.90	95.0	2.00	5.65	
Total Xylenes*	<0.150	0.150	10/19/2019	ND	5.69	94.8	6.00	5.77	
Total BTX	<0.300	0.300	10/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1180	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/21/2019	ND	215	108	200	2.74	
DRO >C10-C28*	<10.0	10.0	10/21/2019	ND	208	104	200	1.57	
EXT DRO >C28-C36	<10.0	10.0	10/21/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 DANIEL DOMINGUEZ
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	10/17/2019	Sampling Date:	10/14/2019
Reported:	10/23/2019	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	GOODNIGHT MIDSTREAM - 10769	Sample Received By:	Jodi Henson
Project Location:	UL M SEC18 T21S R37W		

Sample ID: WW 4 (H903563-27)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2019	ND	1.76	87.9	2.00	0.186	
Toluene*	<0.050	0.050	10/23/2019	ND	1.75	87.7	2.00	0.319	
Ethylbenzene*	<0.050	0.050	10/23/2019	ND	1.76	88.2	2.00	0.455	
Total Xylenes*	<0.150	0.150	10/23/2019	ND	5.28	88.1	6.00	0.430	
Total BTX	<0.300	0.300	10/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2240	16.0	10/22/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/22/2019	ND	209	104	200	2.83	
DRO >C10-C28*	<10.0	10.0	10/22/2019	ND	207	103	200	2.45	
EXT DRO >C28-C36	<10.0	10.0	10/22/2019	ND					

Surrogate: 1-Chlorooctane 95.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Goodnight Midstream Permian, LLC				BILL TO				ANALYSIS REQUEST													
Project Manager: Daniel Dominguez				P.O. #:																	
Address: 3100 Plains Hwy				Company: Etech Environmental & Safety Solutions																	
City: Lovington		State: NM		Zip: 88260		Attn: Daniel Dominguez															
Phone #: 575-396-2378		Fax #: 575-396-1429		Address: P.O. Box 301																	
Project #: 10769		Project Owner: Goodnight Midstream Permian, LLC		City: Lovington																	
Project Name: Piper SWD Fire				State: NM		Zip: 88260															
Project Location: UL/ "M" Sec 18 T21S - R37W				Phone #: 575-396-2378																	
Sampler Name: Daniel Dominguez				Fax #: 575-396-1429																	
FOR LAB USE ONLY																					
Lab I.D.		Sample I.D.		(GRAB OR C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING									
				GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :	



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Goodnight Midstream Permian, LLC				BILL TO				ANALYSIS REQUEST																					
Project Manager: Daniel Dominguez				P.O. #:																									
Address: 3100 Plains Hwy				Company: Etech Environmental & Safety Solutions																									
City: Lovington State: NM Zip: 88260				Attn: Daniel Dominguez																									
Phone #: 575-396-2378 Fax #: 575-396-1429				Address: P.O. Box 301																									
Project #: 10769 Project Owner: Goodnight Midstream Permian, LLC				City: Lovington																									
Project Name: Piper SWD Fire				State: NM Zip: 88260																									
Project Location: UL/ "M" Sec 18 T21S - R37W				Phone #: 575-396-2378																									
Sampler Name: Daniel Dominguez				Fax #: 575-396-1429																									
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING																			
Lab I.D.	Sample I.D.	(GRAB OR C/COMP.)	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chloride	TPH	BTEX 8021												
H903563																													
11	Floor 11	C	1			X				X			10/14/19	12:07	X	X	X												
12	Floor 12	C	1			X				X			10/14/19	12:08	X	X	X												
13	NW1b	C	1			X				X			10/14/19	12:15	X	X	X												
14	NW2b	C	1			X				X			10/14/19	12:20	X	X	X												
15	NW3b	C	1			X				X			10/14/19	12:25	X	X	X												
16	EW1b	C	1			X				X			10/14/19	12:30	X	X	X												
17	EW2	C	1			X				X			10/14/19	12:35	X	X	X												
18	EW3	C	1			X				X			10/14/19	12:40	X	X	X												
19	EW4b	C	1			X				X			10/14/19	12:45	X	X	X												
20	SW1	C	1			X				X			10/14/19	12:50	X	X	X												

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Relinquished By:	Date: 10/17	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
<i>[Signature]</i>	Time: 4:41	<i>[Signature]</i>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: email results to daniel@etechenv.com	
Delivered By: (Circle One) <i>t.4</i>	Sample Condition	CHECKED BY:		
Sampler - UPS - Bus - Other: <i>2.50 2.90 #97</i>	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	<i>[Signature]</i>		

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476



Company Name: Goodnight Midstream Permian, LLC				BILL TO				ANALYSIS REQUEST																											
Project Manager: Daniel Dominguez				P.O. #:																															
Address: 3100 Plains Hwy				Company: Etech Environmental & Safety Solutions																															
City: Lovington State: NM Zip: 88260				Attn: Daniel Dominguez																															
Phone #: 575-396-2378 Fax #: 575-396-1429				Address: P.O. Box 301																															
Project #: 10769 Project Owner: Goodnight Midstream Permian, LLC				City: Lovington																															
Project Name: Piper SWD Fire				State: NM Zip: 88260																															
Project Location: UL/ "M" Sec 18 T21S - R37W				Phone #: 575-396-2378																															
Sampler Name:				Fax #: 575-396-1429																															
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING																									
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER														SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL	
H9D3563				C		1		X												X				10/14/19		12:55		X		X		X			
21		SW2b		C		1		X												X				10/14/19		13:00		X		X		X			
22		SW3b		C		1		X												X				10/14/19		13:05		X		X		X			
23		SW4b		C		1		X												X				10/14/19		13:10		X		X		X			
24		VWV1b		C		1		X												X				10/14/19		13:14		X		X		X			
25		VWV2b		C		1		X												X				10/14/19		13:19		X		X		X			
26		VWV3		C		1		X												X				10/14/19		13:24		X		X		X			
27		VWV4		C		1		X												X				10/14/19		13:24		X		X		X			

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 14, 2020

JOEL LOWRY

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: PIPER SWD FIRE

Enclosed are the results of analyses for samples received by the laboratory on 02/12/20 15:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

Received:	02/12/2020	Sampling Date:	02/10/2020
Reported:	02/14/2020	Sampling Type:	Soil
Project Name:	PIPER SWD FIRE	Sampling Condition:	Cool & Intact
Project Number:	10769	Sample Received By:	Tamara Oldaker
Project Location:	UL M SEC18 T21S R37W		

Sample ID: EW 36 (H000426-01)

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/13/2020	ND	219	109	200	2.23	
DRO >C10-C28*	<10.0	10.0	02/13/2020	ND	221	110	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	02/13/2020	ND					
Surrogate: 1-Chlorooctane	103 %	41-142							
Surrogate: 1-Chlorooctadecane	104 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



(575) 393-2326 FAX (575) 393-2476

x written changes to 575-393-2476

FORM-006
Revision 1.0



Certificate of Analysis Summary 690604

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Piper SWD

Project Id:

Contact: Joel Lowry

Project Location:

Date Received in Lab: Fri 03.05.2021 12:20

Report Date: 03.15.2021 14:01

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	690604-001	690604-002	690604-003	690604-004	690604-005	
	<i>Field Id:</i>	Floor 2 @ 5'	Floor 4 @ 5'	Floor 5 @ 5'	Floor 8 @ 5'	Floor 9 @ 5'	
	<i>Depth:</i>	5- ft	5- ft	5- ft	5- ft	5- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	03.03.2021 00:00	03.03.2021 00:00	03.03.2021 00:00	03.03.2021 00:00	03.03.2021 00:00	
BTEX by EPA 8021B	<i>Extracted:</i>	03.12.2021 17:00	03.12.2021 17:00	03.12.2021 17:00	03.12.2021 17:00	03.12.2021 17:00	
	<i>Analyzed:</i>	03.13.2021 00:51	03.13.2021 01:12	03.13.2021 01:33	03.13.2021 01:54	03.13.2021 03:18	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	
m,p-Xylenes		<0.00400 0.00400	<0.00398 0.00398	<0.00398 0.00398	<0.00396 0.00396	<0.00398 0.00398	
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	
Chloride by EPA 300	<i>Extracted:</i>	03.09.2021 14:45	03.09.2021 14:45	03.09.2021 14:45	03.09.2021 14:45	03.09.2021 14:45	
	<i>Analyzed:</i>	03.09.2021 17:32	03.09.2021 17:37	03.09.2021 16:57	03.09.2021 17:02	03.09.2021 17:07	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		226 4.95	89.4 4.95	479 4.95	236 5.02	136 4.97	
TPH By SW8015 Mod	<i>Extracted:</i>	03.09.2021 12:00	03.09.2021 12:00	03.09.2021 12:00	03.09.2021 12:00	03.09.2021 12:00	
	<i>Analyzed:</i>	03.09.2021 17:45	03.09.2021 18:06	03.09.2021 18:27	03.09.2021 18:49	03.09.2021 19:10	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer

Analytical Report 690604

for

Etech Environmental & Safety Solution, Inc

Project Manager: Joel Lowry

Piper SWD

03.15.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.15.2021

Project Manager: **Joel Lowry**

Etech Environmental & Safety Solution, Inc

P.O. Box 62228

Midland, TX 79711

Reference: Eurofins Xenco, LLC Report No(s): **690604**

Piper SWD

Project Address:

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 690604. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 690604 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 690604****Etech Environmental & Safety Solution, Inc, Midland, TX**

Piper SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Floor 2 @ 5'	S	03.03.2021 00:00	5 ft	690604-001
Floor 4 @ 5'	S	03.03.2021 00:00	5 ft	690604-002
Floor 5 @ 5'	S	03.03.2021 00:00	5 ft	690604-003
Floor 8 @ 5'	S	03.03.2021 00:00	5 ft	690604-004
Floor 9 @ 5'	S	03.03.2021 00:00	5 ft	690604-005



CASE NARRATIVE

Client Name: Etech Environmental & Safety Solution, Inc

Project Name: Piper SWD

Project ID:

Work Order Number(s): 690604

Report Date: 03.15.2021

Date Received: 03.05.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 690604

Etech Environmental & Safety Solution, Inc, Midland, TX Piper SWD

Sample Id: **Floor 2 @ 5'** Matrix: Soil Date Received: 03.05.2021 12:20
 Lab Sample Id: 690604-001 Date Collected: 03.03.2021 00:00 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 03.09.2021 14:45 % Moisture:
 Seq Number: 3153100 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	226	4.95	mg/kg	03.09.2021 17:32		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 03.09.2021 12:00 % Moisture:
 Seq Number: 3153146 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.09.2021 17:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.09.2021 17:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.09.2021 17:45	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.09.2021 17:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	03.09.2021 17:45	
o-Terphenyl	84-15-1	98	%	70-130	03.09.2021 17:45	



Certificate of Analytical Results 690604

Etech Environmental & Safety Solution, Inc, Midland, TX Piper SWD

Sample Id: **Floor 2 @ 5'**

Matrix: Soil

Date Received: 03.05.2021 12:20

Lab Sample Id: 690604-001

Date Collected: 03.03.2021 00:00

Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.12.2021 17:00

% Moisture:

Seq Number: 3153566

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.13.2021 00:51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.13.2021 00:51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.13.2021 00:51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.13.2021 00:51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.13.2021 00:51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.13.2021 00:51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.13.2021 00:51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	03.13.2021 00:51		
4-Bromofluorobenzene	460-00-4	106	%	70-130	03.13.2021 00:51		



Certificate of Analytical Results 690604

Etech Environmental & Safety Solution, Inc, Midland, TX Piper SWD

Sample Id: **Floor 4 @ 5'** Matrix: Soil Date Received: 03.05.2021 12:20
 Lab Sample Id: 690604-002 Date Collected: 03.03.2021 00:00 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 03.09.2021 14:45 % Moisture:
 Seq Number: 3153100 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	89.4	4.95	mg/kg	03.09.2021 17:37		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 03.09.2021 12:00 % Moisture:
 Seq Number: 3153146 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.09.2021 18:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.09.2021 18:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.09.2021 18:06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.09.2021 18:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-130	03.09.2021 18:06	
o-Terphenyl	84-15-1	100	%	70-130	03.09.2021 18:06	



Certificate of Analytical Results 690604

Etech Environmental & Safety Solution, Inc, Midland, TX Piper SWD

Sample Id: **Floor 4 @ 5'**

Matrix: Soil

Date Received: 03.05.2021 12:20

Lab Sample Id: 690604-002

Date Collected: 03.03.2021 00:00

Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.12.2021 17:00

% Moisture:

Seq Number: 3153566

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.13.2021 01:12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.13.2021 01:12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.13.2021 01:12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.13.2021 01:12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.13.2021 01:12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.13.2021 01:12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.13.2021 01:12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	03.13.2021 01:12		
1,4-Difluorobenzene	540-36-3	102	%	70-130	03.13.2021 01:12		



Certificate of Analytical Results 690604

Etech Environmental & Safety Solution, Inc, Midland, TX Piper SWD

Sample Id: **Floor 5 @ 5'** Matrix: Soil Date Received: 03.05.2021 12:20
 Lab Sample Id: 690604-003 Date Collected: 03.03.2021 00:00 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 03.09.2021 14:45 % Moisture:
 Seq Number: 3153100 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	479	4.95	mg/kg	03.09.2021 16:57		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 03.09.2021 12:00 % Moisture:
 Seq Number: 3153146 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.09.2021 18:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.09.2021 18:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.09.2021 18:27	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.09.2021 18:27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	111	%	70-130	03.09.2021 18:27		
o-Terphenyl	84-15-1	112	%	70-130	03.09.2021 18:27		



Certificate of Analytical Results 690604

Etech Environmental & Safety Solution, Inc, Midland, TX Piper SWD

Sample Id: **Floor 5 @ 5'**

Matrix: Soil

Date Received: 03.05.2021 12:20

Lab Sample Id: 690604-003

Date Collected: 03.03.2021 00:00

Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.12.2021 17:00

% Moisture:

Seq Number: 3153566

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.13.2021 01:33	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.13.2021 01:33	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.13.2021 01:33	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.13.2021 01:33	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.13.2021 01:33	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.13.2021 01:33	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.13.2021 01:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	03.13.2021 01:33		
1,4-Difluorobenzene	540-36-3	105	%	70-130	03.13.2021 01:33		



Certificate of Analytical Results 690604

Etech Environmental & Safety Solution, Inc, Midland, TX Piper SWD

Sample Id: **Floor 8 @ 5'** Matrix: Soil Date Received: 03.05.2021 12:20
 Lab Sample Id: 690604-004 Date Collected: 03.03.2021 00:00 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 03.09.2021 14:45 % Moisture:
 Seq Number: 3153100 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	236	5.02	mg/kg	03.09.2021 17:02		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 03.09.2021 12:00 % Moisture:
 Seq Number: 3153146 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.09.2021 18:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.09.2021 18:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.09.2021 18:49	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.09.2021 18:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	03.09.2021 18:49	
o-Terphenyl	84-15-1	96	%	70-130	03.09.2021 18:49	



Certificate of Analytical Results 690604

Etech Environmental & Safety Solution, Inc, Midland, TX Piper SWD

Sample Id: **Floor 8 @ 5'**

Matrix: Soil

Date Received: 03.05.2021 12:20

Lab Sample Id: 690604-004

Date Collected: 03.03.2021 00:00

Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.12.2021 17:00

% Moisture:

Seq Number: 3153566

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.13.2021 01:54	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.13.2021 01:54	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.13.2021 01:54	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.13.2021 01:54	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.13.2021 01:54	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.13.2021 01:54	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.13.2021 01:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.13.2021 01:54		
4-Bromofluorobenzene	460-00-4	105	%	70-130	03.13.2021 01:54		



Certificate of Analytical Results 690604

Etech Environmental & Safety Solution, Inc, Midland, TX Piper SWD

Sample Id: **Floor 9 @ 5'** Matrix: Soil Date Received: 03.05.2021 12:20
 Lab Sample Id: 690604-005 Date Collected: 03.03.2021 00:00 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 03.09.2021 14:45 % Moisture:
 Seq Number: 3153100 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	136	4.97	mg/kg	03.09.2021 17:07		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 03.09.2021 12:00 % Moisture:
 Seq Number: 3153146 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.09.2021 19:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.09.2021 19:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.09.2021 19:10	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.09.2021 19:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	95	%	70-130	03.09.2021 19:10		
o-Terphenyl	84-15-1	98	%	70-130	03.09.2021 19:10		



Certificate of Analytical Results 690604

Etech Environmental & Safety Solution, Inc, Midland, TX Piper SWD

Sample Id: **Floor 9 @ 5'**

Matrix: Soil

Date Received: 03.05.2021 12:20

Lab Sample Id: 690604-005

Date Collected: 03.03.2021 00:00

Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.12.2021 17:00

% Moisture:

Seq Number: 3153566

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.13.2021 03:18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.13.2021 03:18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.13.2021 03:18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.13.2021 03:18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.13.2021 03:18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.13.2021 03:18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.13.2021 03:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.13.2021 03:18		
4-Bromofluorobenzene	460-00-4	100	%	70-130	03.13.2021 03:18		

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Etech Environmental & Safety Solution, Inc

Piper SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3153100

MB Sample Id: 7722902-1-BLK

Matrix: Solid

LCS Sample Id: 7722902-1-BKS

Prep Method: E300P

Date Prep: 03.09.2021

LCSD Sample Id: 7722902-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	251	100	251	100	90-110	0	20	mg/kg	03.09.2021 14:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3153100

Parent Sample Id: 690309-048

Matrix: Soil

MS Sample Id: 690309-048 S

Prep Method: E300P

Date Prep: 03.09.2021

MSD Sample Id: 690309-048 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	33.4	250	285	101	285	101	90-110	0	20	mg/kg	03.09.2021 16:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3153100

Parent Sample Id: 690309-062

Matrix: Soil

MS Sample Id: 690309-062 S

Prep Method: E300P

Date Prep: 03.09.2021

MSD Sample Id: 690309-062 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	179	253	428	98	428	98	90-110	0	20	mg/kg	03.09.2021 16:05	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3153146

MB Sample Id: 7722928-1-BLK

Matrix: Solid

LCS Sample Id: 7722928-1-BKS

Prep Method: SW8015P

Date Prep: 03.09.2021

LCSD Sample Id: 7722928-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	945	95	1040	104	70-130	10	20	mg/kg	03.09.2021 11:46	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	994	99	70-130	2	20	mg/kg	03.09.2021 11:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		99		99		70-130	%	03.09.2021 11:46
o-Terphenyl	100		90		89		70-130	%	03.09.2021 11:46

Analytical Method: TPH By SW8015 Mod

Seq Number: 3153146

Matrix: Solid

MB Sample Id: 7722928-1-BLK

Prep Method: SW8015P

Date Prep: 03.09.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.09.2021 11:25	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * | (C - E) / (C + E) |$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Etech Environmental & Safety Solution, Inc

Piper SWD

Analytical Method: TPH By SW8015 Mod

Seq Number: 3153146

Parent Sample Id: 690312-001

Matrix: Soil

MS Sample Id: 690312-001 S

Prep Method: SW8015P

Date Prep: 03.09.2021

MSD Sample Id: 690312-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	931	93	944	95	70-130	1	20	mg/kg	03.09.2021 12:49	
Diesel Range Organics (DRO)	<50.0	1000	893	89	902	90	70-130	1	20	mg/kg	03.09.2021 12:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		90		70-130	%	03.09.2021 12:49
o-Terphenyl	79		79		70-130	%	03.09.2021 12:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3153566

MB Sample Id: 7723262-1-BLK

Matrix: Solid

LCS Sample Id: 7723262-1-BKS

Prep Method: SW5035A

Date Prep: 03.12.2021

LCSD Sample Id: 7723262-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.108	108	0.104	104	70-130	4	35	mg/kg	03.12.2021 20:23	
Toluene	<0.00200	0.100	0.104	104	0.0983	98	70-130	6	35	mg/kg	03.12.2021 20:23	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0962	96	70-130	5	35	mg/kg	03.12.2021 20:23	
m,p-Xylenes	<0.00400	0.200	0.206	103	0.193	97	70-130	7	35	mg/kg	03.12.2021 20:23	
o-Xylene	<0.00200	0.100	0.0995	100	0.0943	94	70-130	5	35	mg/kg	03.12.2021 20:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		103		98		70-130	%	03.12.2021 20:23
4-Bromofluorobenzene	104		101		96		70-130	%	03.12.2021 20:23

Analytical Method: BTEX by EPA 8021B

Seq Number: 3153566

Parent Sample Id: 690437-002

Matrix: Soil

MS Sample Id: 690437-002 S

Prep Method: SW5035A

Date Prep: 03.12.2021

MSD Sample Id: 690437-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0976	98	0.0990	100	70-130	1	35	mg/kg	03.12.2021 21:04	
Toluene	<0.00200	0.100	0.0934	93	0.0934	94	70-130	0	35	mg/kg	03.12.2021 21:04	
Ethylbenzene	<0.00200	0.100	0.0894	89	0.0914	92	70-130	2	35	mg/kg	03.12.2021 21:04	
m,p-Xylenes	<0.00400	0.200	0.184	92	0.184	92	70-130	0	35	mg/kg	03.12.2021 21:04	
o-Xylene	<0.00200	0.100	0.0887	89	0.0895	90	70-130	1	35	mg/kg	03.12.2021 21:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	03.12.2021 21:04
4-Bromofluorobenzene	103		103		70-130	%	03.12.2021 21:04

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Etech Environmental & Safety Solution, I

Date/ Time Received: 03.05.2021 12.20.00 PM

Work Order #: 690604

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

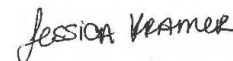
Checklist completed by:



Brianna Teel

Date: 03.05.2021

Checklist reviewed by:



Jessica Kramer

Date: 03.09.2021

Appendix D

Photographic Log

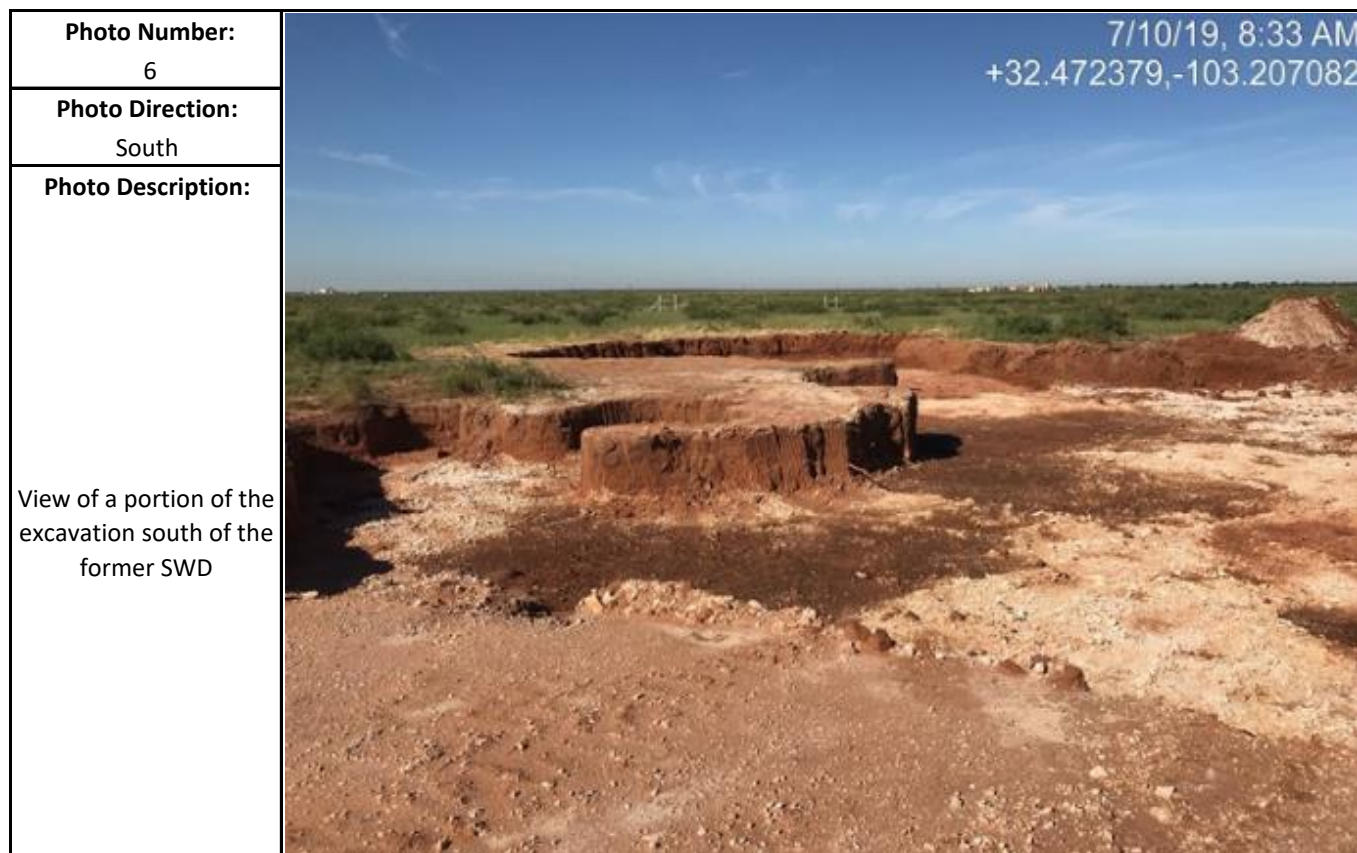
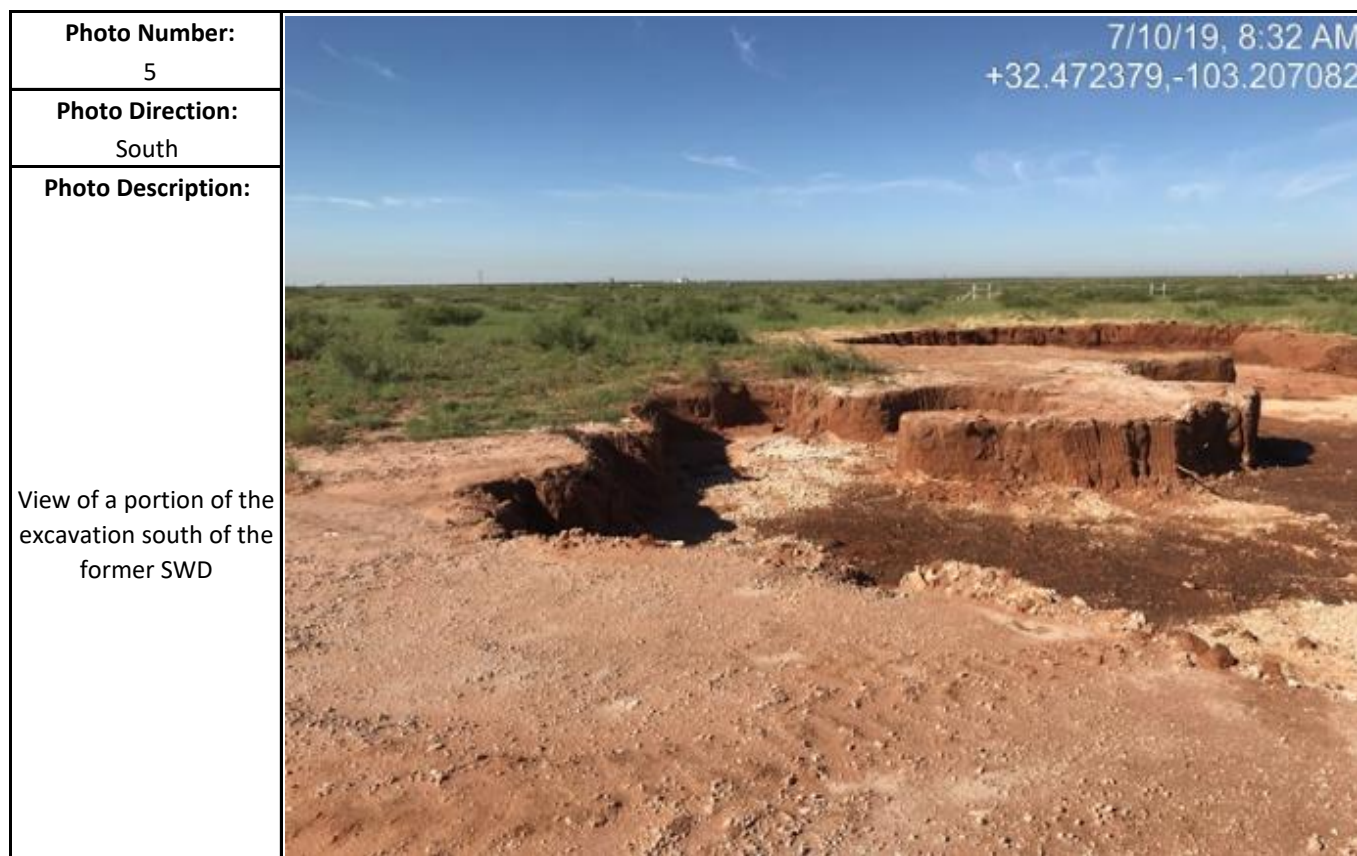
Photographic Log



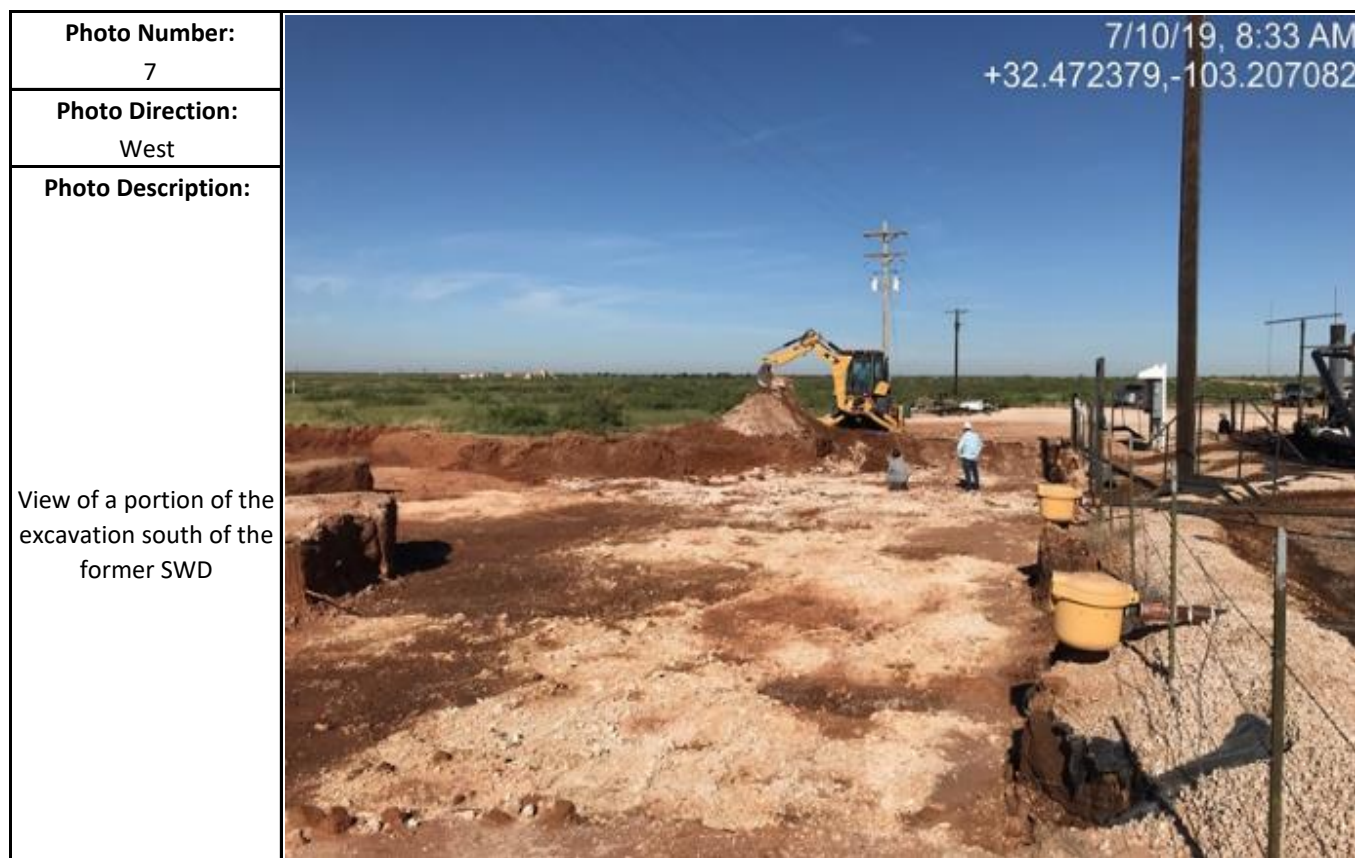
Photographic Log



Photographic Log



Photographic Log



Photographic Log



Photo Number: 9	
Photo Direction: South	
Photo Description: View of remediated area south of the former SWD after backfill & regrading	

Photo Number: 10	
Photo Direction: South	
Photo Description: View of remediated area south of the former SWD after backfill & regrading	

Photographic Log


Photo Number: 11	 <p>8/1/19, 7:35 AM +32.472323,-103.207384</p>
Photo Direction: South	
Photo Description: View of remediated area south of the former SWD after backfill & regrading	

Photo Number: 12	 <p>8/2/19, 7:11 AM +32.472357,-103.207199</p>
Photo Direction: North	
Photo Description: View of the initial surface scrape after removal of the SWD equipment and containment area	

Photographic Log


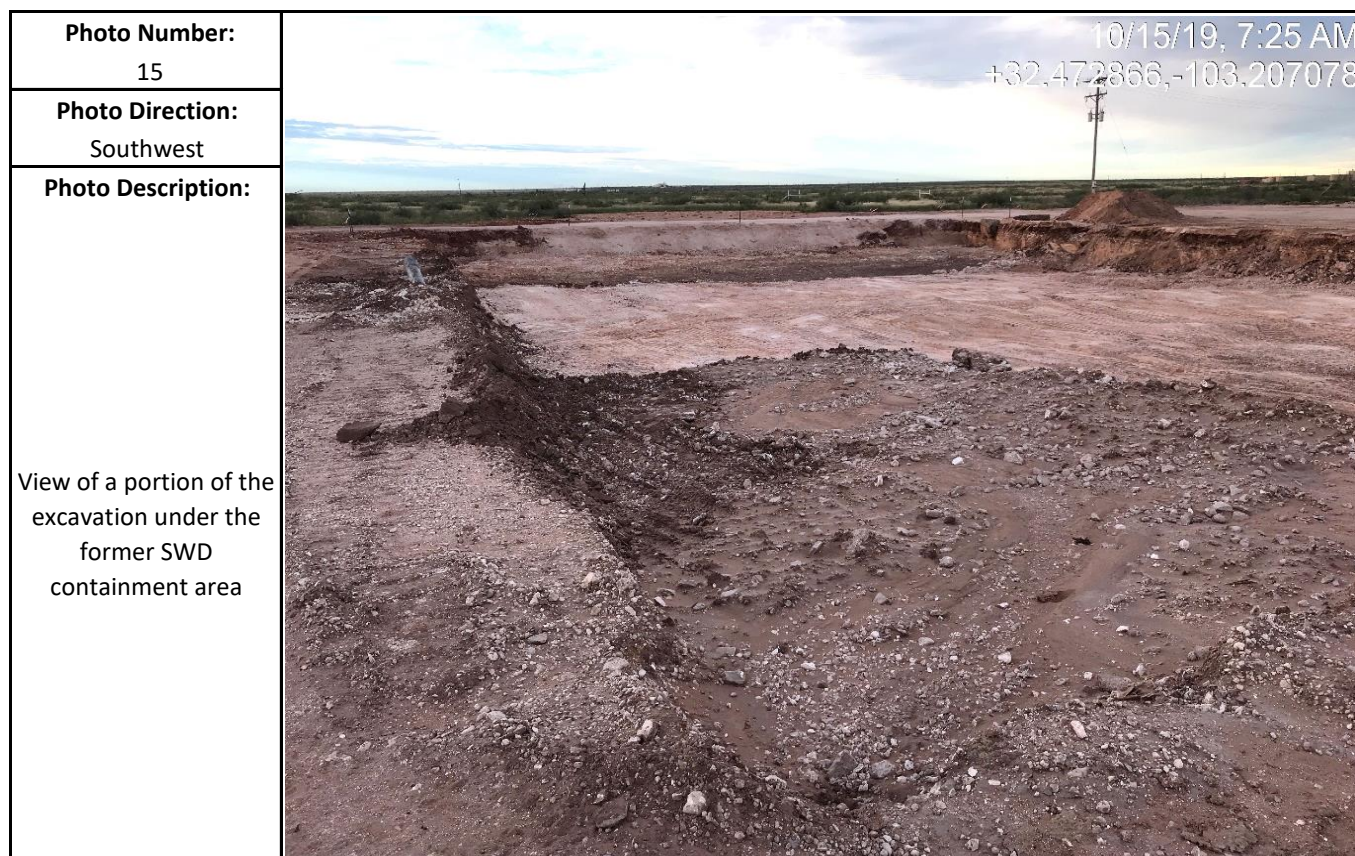
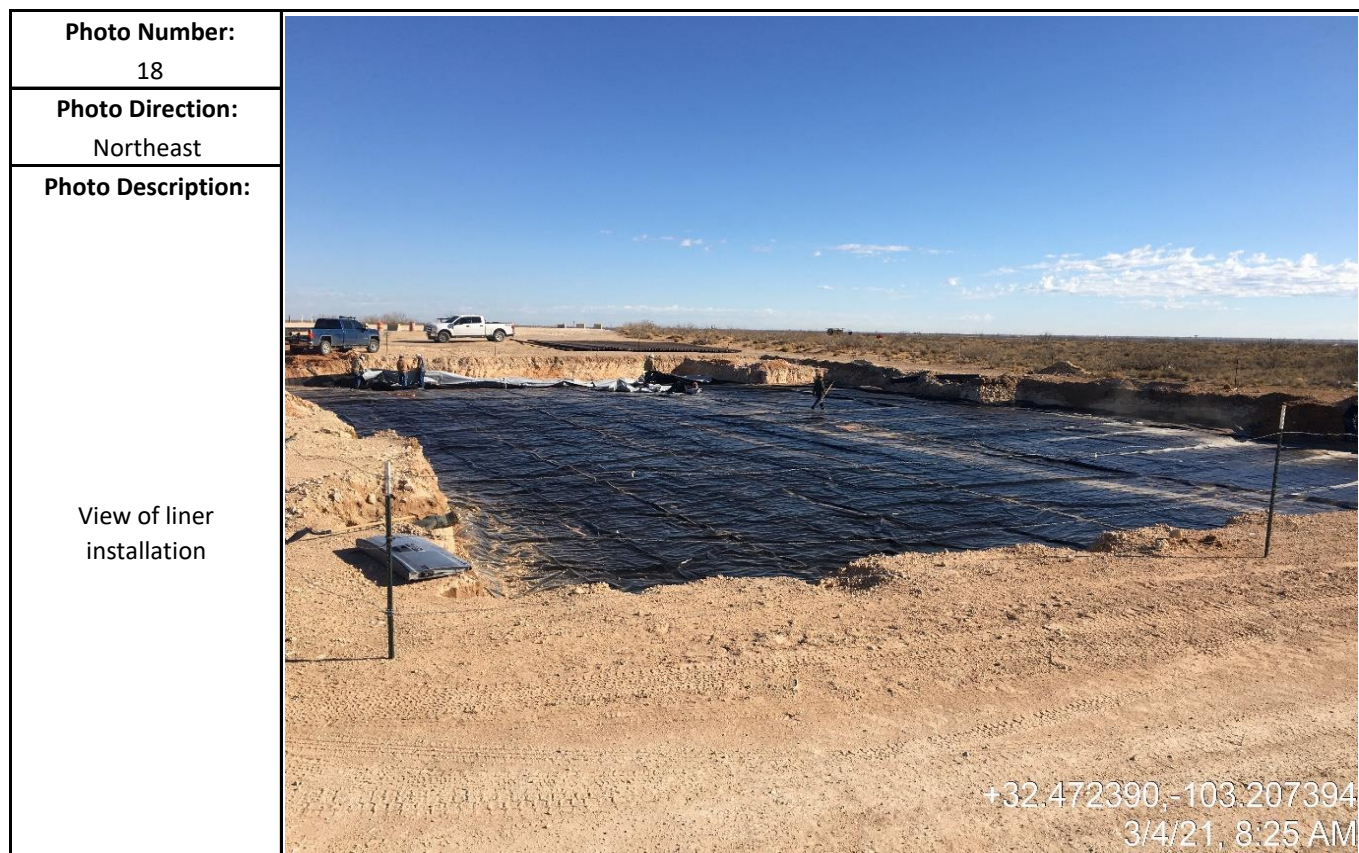
Photo Number: 13	
Photo Direction: South	
Photo Description: View of a portion of the excavation under the former SWD containment area	

Photo Number: 14	
Photo Direction: Southeast	
Photo Description: View of a portion of the excavation under the former SWD containment area	


Photographic Log




Photographic Log



Photographic Log

Photo Number: 19	
Photo Direction: Southwest	
Photo Description: View of remediated area after backfill and regrading	

+32.472906,-103.207025
3/12/21, 6:05 PM

Photo Number: 20	
Photo Direction: Northwest	
Photo Description: View of remediated area after backfill and regrading	

+32.472295,-103.207018
3/12/21, 6:06 PM

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 28025

CONDITIONS

Operator: GOODNIGHT MIDSTREAM PERMIAN, LLC 5910 North Central Expressway Dallas, TX 75206	OGRID: 372311
	Action Number: 28025
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	Sample points WW1B, WW2B, WW3, and WW4 meet closure criteria on >51ft.	8/2/2021